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Carroll College Bulletin

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UNIVERSITY OF ILLINOIS

The Annual Catalogue

1909 - 1910

Waukesha, Wisconsin

April, 1910

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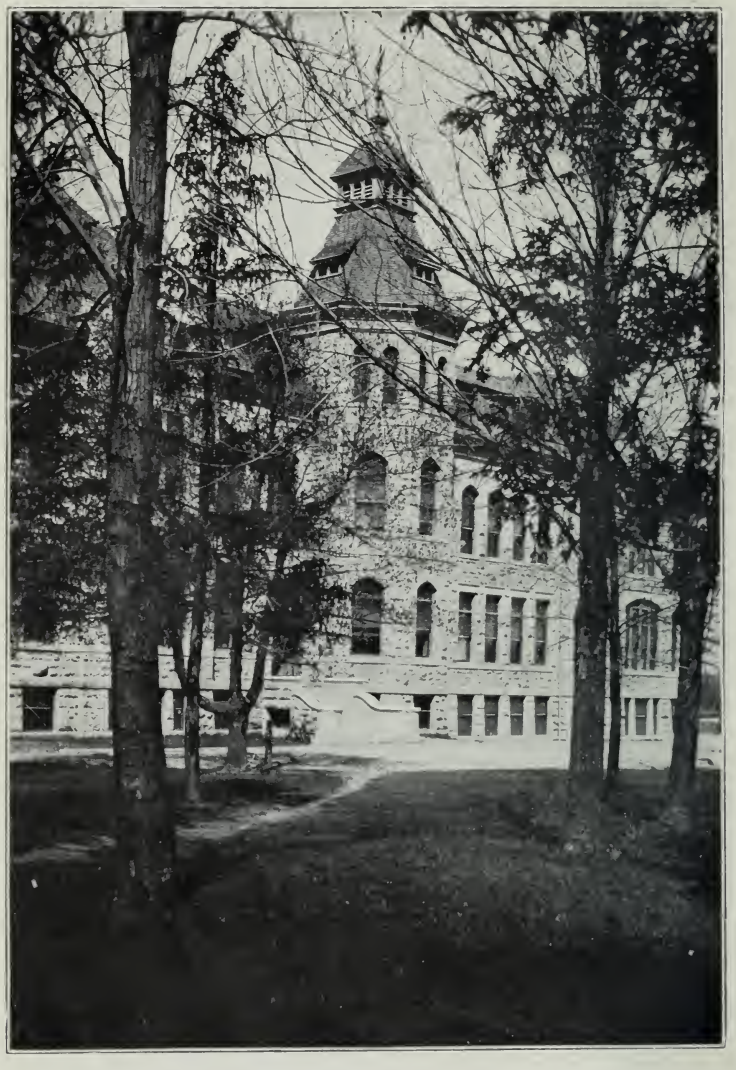

Vol. VII. No. 1.

CARROLL COLLEGE BULLETIN

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THE ANNUAL CATALOGUE

FOR THE ACADEMIC YEAR

1909 - 1910

WITH ANNOUNCEMENTS FOR THE YEAR

1910 - 1911

WAUKESHA, WISCONSIN

APRIL, 1910

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CONTENTS.

PAGE
The College Calendar 6
The Board of Trustees 8
Officers and Committees of the Trustees 9
The Faculty 10
Other Officers 12
Committees of the Faculty 12
Carroll College.
The American College 13
Advantages of the College 13
Purpose of Carroll College 14
Courses of Study 14
Atmosphere of the College 15
A Coeducational Institution 15
Location 15
Campus 16
Buildings and Equipment 16
Laboratories 17
Museum 21
Library 21
Dormitory 22
Admission and Graduation 24
Admission by Certificate 24
Admission by Examination 24
Requirements for Admission 24
Admission to Partial Courses 27
Admission to Advanced Standing 28
Relation to the State University 28
Student Advisers 28
Registration 29
Requirements for the Degree of Bachelor of Arts 29
Required Studies 30
Major Study and Thesis 30
Electives 31
Failures and Conditions 31
Studies of the Freshman Year 31
Sophomore, Junior and Senior Years 32
Requirements foor the Degree of Bachelor of Science 32
Preparation for Professional Courses 32
Teaching 33
Medicine 33
Law 34
Theology 34
Engineering 34
Course in Chemistry 35
University Scholarship 36
Departments of Instruction 37
Biblical Literature 37

PAGE
Biology 39
Chemistry 43
Education 50
English 52
Geology 55
Greek 56
History and Economics 57
Latin 64
Library Science 66
Mathematics 67
Mineralogy 71
Modern Languages 71
Philosophy 75
Public Speaking and Dramatic Literature 78
Physics 76
Sociology 80
DEPARTMENT OF MUSIC 82
PHYSICAL DEPARTMENT 89
Gymnasium 89
Outdoor and Indoor Sports 90
ACADEMY 92
Courses of Study 92
Biology 94
Education 94
English 95
German 96
History and Civics 96
Latin 97
Mathematics 97
Public Speaking and Dramatic Literature 98
Physics 99
Physiography 100
GENERAL INFORMATION 101
Student Organizations 101
Christian Associations 101
Musical Clubs 101
Literary Societies 101
Oratorical League 102
Athletic Association 102
Publications 102
Social Life 103
Book Store 103
Expenses 103
REGULATIONS 106
MEDICAL DEPARTMENT 108
DENTAL DEPARTMENT 112
ROLL OF STUDENTS 116
SUMMARY OF STUDENTS 127
INDEX 128

CALENDAR FOR 1910.

JANUARY.

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Calendar for 1910 - 11.

1910

January 31	Second semester begins; Monday.
March 24	Annual Prize Debate between the Aristonian and Philomathean Literary societies; Thursday, 8 P. M.
March 25	Spring recess begins; Friday, 4 P. M.
April 5	Spring recess ends; Tuesday, 8 A. M.
June 12	Baccalaureate Sermon; Sunday.
June 13	Senior Orations, Academy; Monday, 10 A. M.
June 13	Field Day Exercises; Monday, 2 P. M.
June 13	Annual Recital by Departments of Music and Oratory; Monday, 8 P. M.
June 14	Chapel Service; Tuesday, 10 A. M.
June 14	Annual meeting Board of Trustees; Tuesday, 1:30 P. M.
June 14	Class Day Exercises; Tuesday, 3 P. M.
June 14	Alumni Banquet; Tuesday, 6 P. M.
June 15	Commencement Exercises; Wednesday, 10 A. M.
June 15	President's Reception; Wednesday, 3 to 5 P. M.

September 13	Registration; Tuesday, 9 to 12 A. M., 1 to 4 P. M.
September 14	First semester begins; Wednesday, 10 A. M.
November 24	Thanksgiving; a holiday.
December 16	Christmas recess begins; Friday, 4 P. M.

1911

January 3	Christmas recess ends; Tuesday, 8 A. M.
January 27	First semester ends; Friday.
January 30	Second semester begins; Monday.
March 23	Annual Prize Debate between the Aristonian and Philomathean Literary societies; Thursday, 8 P. M.

March 24	Spring recess begins; Friday, 4 P. M.
April 4	Spring recess ends; Tuesday, 8 A. M.
June 11	Baccalaureate Sermon: Sunday.
June 12	Senior Orations, Academy; Monday, 10 A. M.
June 12	Annual Recital by Departments of Music and Oratory; Monday, 8 P. M.
June 13	Chapel Service; Tuesday, 10 A. M.
June 13	Annual meeting Board of Trustees; Tuesday, 1:30 P. M.
June 13	Field Day; Tuesday, 2 P. M.
June 13	Alumni Banquet; Tuesday, 6 P. M.
June 13	Commencement Exercises; Wednesday, 10 A. M.
June 13	President's Reception; Wednesday, 3 to 5 P. M.

The Board of Trustees.

Elected by the Synod of the Presbyterian Church of Wisconsin.

TERM EXPIRES JUNE, 1911.

ANDREW STEVENSON,	Chicago.
JOSEPH E. WILDISH,	Milwaukee.
R. P. PERRY,	Reedsburg.
JUDGE ELBERT O. HAND,	Racine.
ANDREW WEEK,	Stevens Point.
CHARLES E. HASTINGS.	Chicago.

TERM EXPIRES JUNE, 1912.

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REV. THOS. S. JOHNSON,	Beaver Dam.
HON. HARLAN P. BIRD,	Wausaukee.
JACOB MORTENSON,	Oak Park, Ill.
WALTER L. RANKIN, PH. D.,	Waukesha.
REV. DAVID C. JONES,	La Crosse.

TERM EXPIRES JUNE, 1913.

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WILLIAM W. PERRY,	Milwaukee.
HENRY M. YOUMANS,	Waukesha.
WALTER H. BISSELL,	Wausau.
WILLIAM MAINLAND,	Oshkosh.
HON. WILLIAM D. CONNOR,	Marshfield.

TERM EXPIRES JUNE, 1914.

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REV. EVERETT A. CUTLER,	Milwaukee.
SAMUEL HARDING,	Waukesha.
ALFRED S. BADGER, D.D.,	Waukesha.
S. FRANK SHATTUCK,	Neenah.
HENRY PHELPS,	Waukesha.

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Alfred S. Badger, D.D.,	Vice-President.
Henry Phelps,	Secretary.
Walter R. Frame,	Treasurer.

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W. O. Carrier, D.D.	A. S. Badger, D.D.
Walter L. Rankin, Ph. D.	H. M. Youmans.

Henry Phelps.

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William Mainland.	Frank Shattuck.
Judge E. O. Hand.	Hon. W. D. Connor.

Jacob Mortenson.

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Rev. Paul P. Jenkins.	Rev. E. A. Cutler.

Joseph E. Wildish.

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H. M. Youmans.	Henry Phelps.

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Rev. Augustus Ayres.	Rev. H. C. Postlethwaite.

The Faculty.

WILBUR OSCAR CARRIER, M.A., D.D., PRESIDENT.
Professor of Biblical Literature and Ethics.

WALTER LOWRIE RANKIN, M.A., PH. D., VICE-PRESIDENT.
Professor of Latin.

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Professor of Mathematics and Education.

MAY NICKELL RANKIN, B.A.
Ralph Voorhees Professor of Public Speaking and Dramatic Literature.

WILLIAM ARTHUR GANFIELD, M.A.
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HARRY LINN STARR, M.A.
Professor of English.

JAMES ELCANA ROGERS, PH. D.
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LLOYD SLOTE DANCEY, M.A.
Professor of Physics and Applied Mathematics.

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Professor of Modern Languages; Dean of Women.

AMON BENTON PLOWMAN, PH. D.
Professor of Biology.

B. SMITH HOPKINS, PH. D.
Professor of Chemistry.

ANDREW CHRISTY BROWN, M.A., D.D.
Special Lecturer and Field Secretary.

MYRTA PITTS CARRIER, B.S.
Instructor in Biblical Literature.

WILFRED CHARLES BLEAMASTER, B.A.
Instructor in English and History.

EDWARD JOHNSON.
Laboratory Assistant in Chemistry.

BERT WORTHINGTON CLAYTON.
Professor of Music: Voice.

CLARENCE E. SHEPARD.
Professor of Music: Piano, History of Music, and Theory.

BLANCHE WILLSON.
Instructor in Piano, Mandolin, and Guitar.

FLORENCE ARMSTRONG PLOWMAN.
Instructor in Stenography and Typewriting.

WILFRED CHARLES BLEAMASTER.
Physical Director.

OTHER OFFICERS.

SAMUEL BEATTY RAY.
Registrar and Secretary of the Faculty.

AMANDA MOORE FLATTERY.
Librarian.

AMON BENTON PLOWMAN.
Curator of the Museum.

MRS. LILIAN CRAVEN.
Matron of Elizabeth Voorhees Hall.

ALTHIE ANTHIE PITTS.
Secretary to the President.

B. W. WATT.
Custodian.

COMMITTEES OF THE FACULTY.

CURRICULUM AND SCHEDULE—Ray, Starr, Dancey.

LIBRARY—Flattery, Starr, Hopkins.

GRADUATION—W. L. Rankin, Flattery, Ganfield.

PUBLICATION—Starr, Ray, Flattery, Hopkins.

PUBLIC EXERCISES—Ganfield, Rogers, M. N. Rankin.

RULES AND DISCIPLINE—Ray, Ganfield, Guild, Plowman.

ATHLETICS—Dancey, Ganfield, Bleamaster.

PROPERTY—Bleamaster, Dancey.

STUDENT ORGANIZATIONS—Plowman, Ganfield, W. L. Rankin, Guild.

SOCIAL AFFAIRS—Bleamaster, Plowman, M. N. Rankin.

STUDENT ADVISERS—Ray, Hopkins, Plowman, Guild, Flattery, Starr, Rogers, Ganfield, W. L. Rankin.

RELIGIOUS WORK AND CHRISTIAN ORGANIZATIONS—Ganfield, Rogers, Guild.

PRESIDENT CARRIER, *ex-officio* member of all committees.

CARROLL COLLEGE.

The American College.

"A college, according to the common definition, is the place where certain general studies are taught, such as mathematics, the humanities, the sciences." It is this. But it is far more than this. It is "an aggregate of influences which should act upon young men during the plastic years in such a way that on attaining manhood they may be able to confront the world with success." In this conception of the term, the college is a distinctively American institution. Its origin, and the determination of the nature of its development, are to be found in the conditions of American life and character, conditions demanding large vision, adaptability, power of initiative, combined with a high sense of personal responsibility.

Advantages of the College.

For the realization of these ends the college possesses distinct advantages. Here the student will do his work with classes of moderate size, with required recitations, and with examinations. He will be subject to the personal influence of his teachers, men and women chosen on the basis of sound scholarship, broad culture, and high character, and will receive from them such personal attention as is necessary for the development of his highest individual possibilities. Here he will find adequate equipment for his needs, and, at the same time, all the opportunities for study, for investigation, for culture, that he can successfully appropriate in his undergraduate course. The moderate size of the college community makes it possible for the individual student to comprehend, in his experience and opportunities for contact, all, or a very considerable portion of, the interests and activities of the institution, rather than a relatively small and isolated portion, as in the larger and more pretentious institutions. Hence it is that the graduates of the college have had so large a share in the leadership of our country.

Purpose of Carroll College.

It is the primary purpose of Carroll College to maintain and promote the ideal of a broad, liberal culture, to direct its activities and methods toward the development of mind and character, the making of men and women, in all its plans and methods recognizing the principle that a broad foundation of general culture should precede all specialization and professional training, and that the successful life work of a scholar, or man of affairs, is conditioned on the symmetrical development of the whole man.

Courses of Study.

At the same time due recognition is given to the conditions and demands of contemporary life. Recent and prevailing tendencies in our educational system and ideals have thrown added emphasis upon the function of the college in the training of the individual for the service of society. The largely increased, and increasing, demands of professional and technical training, the need of greater adaptability and command of individual powers in commercial and industrial life, render the disciplinary and cultural training of the college more and more necessary for success in these lines. The courses of study of Carroll College represent an attempt to preserve a just balance between studies of cultural and disciplinary character and those possessing an intrinsic practical value. The system of major and minor studies, of broad and representative required subjects, with large opportunities for elective work, makes it possible for the student, while pursuing a liberal course, at the same time to concentrate his attention and effort upon some one subject to such a degree as to realize in that subject a considerable acquisition and attainment, some degree of mastery, which may be utilized in a practical way after graduation.

Any of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathematics; German; Latin; Chemistry; Physics. Certain other subjects not offered as majors may be taken in conjunction with cognate subjects to constitute a major. The suggested groups given under the various departmental statements in this catalogue show some of the possible courses.

Atmosphere of the College.

Carroll College is preëminently a Christian College. While high scholarship and broad culture are emphasized, the supreme importance of things spiritual is constantly recognized. The Bible is given its rightful place in the college curriculum, and the principles of Christianity are inculcated in the chapel service and in the class room. The members of the faculty are all Christian men and women who endeavor to present truth from the standpoint of reverent regard for things sacred and eternal, and to help the students rightly to interpret the facts and laws of life. The atmosphere of the college is distinctly religious but not sectarian. Loyal to the trust imposed by the Synod of the Presbyterian Church of Wisconsin, the college seeks to foster a strong spiritual life, interpreting the spiritual life, not as something distinct and apart from the other phases of life, but as the finest development of them all in perfect and harmonious combination. Several Christian denominations are represented in the faculty, and students of all denominations find here a friendly and congenial atmosphere.

Carroll College a Coeducational Institution.

As men and women are intended for mutual service and in all the phases of life are associated, the ideal condition for their mental and moral development is, not segregation, but association, of the sexes. The policy of coeducation has been adopted in the belief that it is the natural method of training young people. It lessens the dangers of college life and increases its advantages. The healthful interchange of thought and feeling serves as an intellectual stimulus and a moral restraint, while the normal association of young men and women in class room and in all social and literary organizations of the college, tends to broaden the sympathies, and to awaken true manliness and womanliness.

Location.

Waukesha is a city of about nine thousand inhabitants, picturesquely situated in the midst of the rolling country of the Fox River Valley, a country of hills and lakes, of woods and

fertile fields. The college buildings are upon the heights in the south part of the city and command an extended view of a rarely beautiful landscape. The beauty of the surrounding country, the proverbial healthfulness of the locality, and the purity of its far-famed waters make it a most desirable place of residence. Because of the proximity of Milwaukee many of the advantages of a large city are realized. Waukesha is a city of churches whose pastors are ready to extend a welcome to the young people of the college. The moral tone of the community is wholesome and the people are deeply interested in all educational work.

Waukesha is located on lines of three principal railway systems of Wisconsin, the Chicago and Northwestern, the Chicago, Milwaukee and St. Paul, and the Wisconsin Central, and is thus easily accessible from all parts of this and the adjoining states. It is one hundred miles from Chicago, by any of the above named roads, and twenty miles from Milwaukee. Hourly service to the latter city is provided by the electric interurban railway.

Campus.

The campus consists of a wooded tract of fifteen acres on the hills to the south of the Fox River, a most favorable situation for the college. An historic interest attaches to the campus in the presence here of several large Indian effigy mounds and an Indian cornfield.

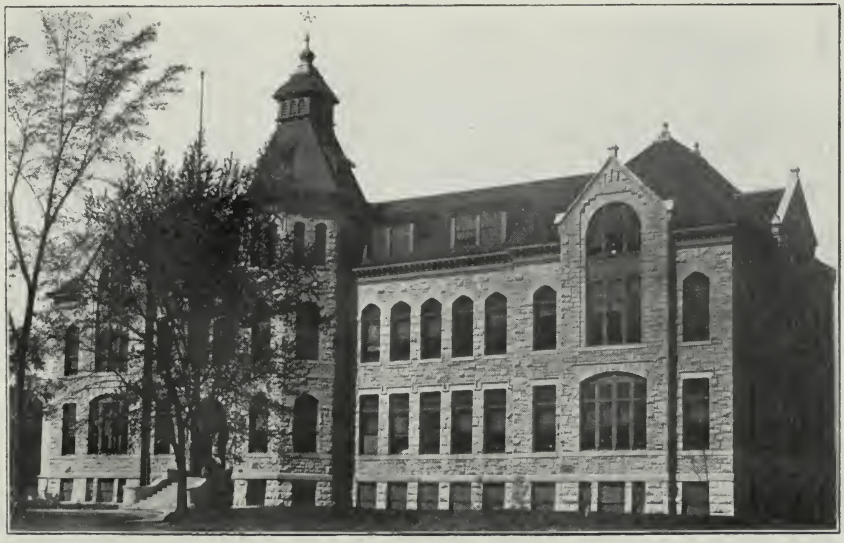
Equipment.

Carroll College is well provided with the equipment necessary for the work of a progressive college.

Plans have been made for a consistent and harmonious group of buildings, four of which have been erected and are now occupied. These are all handsome and substantial structures of stone. They are heated from a central steam plant and lighted by gas and electricity.

Voorhees Hall.

Of this group the central building is Voorhees Hall, completed in 1900. This is a substantial building of stone, beauti-



VOORHEES HALL.

LIBRARY OF THE UNIVERSITY OF ILLINOIS

ful in appearance and convenient in arrangement. In the basement or ground floor, are the gymnasium and bath and locker rooms for young men. The first floor contains the offices of the college, the rooms of the music department, and several recitation rooms. The library and chapel occupy the entire second floor. On the third floor are several recitation rooms and the Y. M. C. A reading room. The building is heated by steam from the central heating plant and is lighted by electricity.

Rankin Hall of Science.

The Walter L. Rankin Hall of Science, erected in 1906 through the munificence of Mr. and Mrs. Ralph Voorhees, is devoted principally to the laboratories and recitation rooms of the departments of Chemistry, Biology, Geology and Physics. The edifice is three stories in height with a high basement, making substantially four stories. It has a south frontage of 132 feet and is 53 feet deep. It is constructed of Waukesha limestone and is covered with a red tile roof. The construction is such that the building is well protected against fire. All of the rooms are well lighted, ventilated, and heated. The departments of Chemistry and Physics occupy the first floor and a portion of the basement. The departments of Biology and Geology occupy the second floor. The third floor contains the museum and two literary society halls.

Chemical Laboratories.

The chemical laboratories are four in number: a laboratory of general chemistry, a laboratory of analytical and organic chemistry, a laboratory for water analysis, and a private laboratory for the instructor in charge. All of these laboratories are located on the first floor of Rankin Hall of Science excepting the laboratory for water analysis, which is located in the well lighted basement. Besides these laboratories there are a dark room in the basement for the storage of acids and combustible and volatile chemicals, a general supply and store room on the first floor, and a balance room. The balance room opens into the laboratory of analytical chemistry and is well supplied with balances of the best makes.

The equipment of the laboratory of general chemistry is of the most modern and approved construction. It includes reagent shelves, balance shelves, air blast, and individual working desks for sixty students. These desks are provided with drawers, lockers, gas, water, and special ventilating tubes. The ventilation of the laboratory is unexcelled. Pipes are carried from each desk to a fifty-inch steel-plate fan in the basement. The fan is driven by an electric motor and discharges into a special flue. Each desk is furnished with a complete set of apparatus, and the laboratory is well supplied with balances, chemicals and general apparatus for a thorough course in general chemistry.

The laboratory of analytical chemistry is equipped with desks for thirty-six students. It is supplied with reagent shelves, air blast, draft-chamber and the best apparatus for accurate analytical work. The draft-chamber is connected with the exhaust fan. The laboratory opens into a balance room which contains Sartorius and Becker balances.

The laboratory for water analysis contains desks for twelve students. It is provided with chemicals and apparatus needed for mineral and sanitary water analysis. The laboratory is located in the basement on the south side and is well lighted.

The store room is well supplied with refined chemicals and apparatus from the best German manufacturers. The store room is open at stated periods for the purpose of supplying students with apparatus which is needed for special experiments.

A preparation room which is equipped with chemicals, minerals, technical products, and lecture apparatus for use in the courses in experimental lectures, opens into the lecture room. The lecture table is supplied with gas, water, the electric current, and a fuming chamber connected with the exhaust fan.

Physical Laboratories.

The lecture room and laboratories of the Department of Physics occupy the west end of the first floor, and a portion of the basement, of the Rankin Hall of Science.

The laboratory of general physics is 53x24 feet, with a

south, west, and north exposure. It is well lighted and is provided with shades of special construction for darkening the room at any time. It contains two large wall cases, which are well supplied with apparatus for use in the study of mechanics, heat, sound, light, and electricity. The laboratory contains an instructor's table and tables for forty students working at one time. These tables are supplied with gas and water, and with electric connection with the large storage battery located in the basement. An office and store room open into this laboratory.

The lecture room is a well lighted room with a south exposure. This also opens into the office and store room. The lecture room has seats for fifty students and is provided with a lecture table supplied with gas, water, storage battery connections, and direct and alternating current. The room can be darkened at any time, and is provided with a heliostat, stereopticon, and screen. The store room adjoining the lecture room is well supplied with apparatus for class demonstration and illustrated lectures.

In the basement there is a laboratory for advanced work in magnetism and electricity. In addition to a new collection of measuring instruments and a large storage battery there are five dynamos and motors, illustrating both direct and alternating current types of machines. The laboratories are connected with the city electric plant.

Biological Laboratories.

The laboratories for biology occupy the west end of the second floor of Rankin Hall of Science. The laboratory for general biology is a large, well lighted room with desks and lockers for thirty pupils working at one time. There are two microscope cases with lockers for twenty-six microscopes and cupboards for other supplies. A Wardian case and a large aquarium provided with water connections form a part of the permanent equipment. Adjoining this laboratory, is a preparation and general supply room, where paraffin imbedding and sectioning may be done. There is an advanced biological laboratory equipped with desks and lockers for eighteen microscopes and cupboards for other supplies. Just off from this

is a dark-room fitted for all kinds of photographic work. It is used also for experiments in plant physiology. A lecture room, accommodating twenty-four students, is fitted with a stereopticon and screen and can be darkened at any time.

The equipment of these laboratories includes, in addition to the fixtures already referred to, twenty-two compound microscopes, twenty-two dissecting microscopes, microtomes for all kinds of sectioning work, including a Minot automatic rotary microtome of the latest model, drying ovens, paraffin baths, steam sterilizer, camera lucida, stage and eye-piece micrometers, injecting apparatus, animal cages, collecting cases, gas pressure regulator, thermo-regulators, balances, and a collection of histological slides of different plant and animal tissues. Glassware, stains, and reagents are provided for microscopical, histological, and general laboratory work.

This equipment is supplemented by some 1,500 lantern slides, over 3,000 microscope slides, a laboratory camera, a lantern-slide camera, and a set of micrographic and micro-projection lenses, belonging to the instructor in charge of the department.

The museum, which is more fully described elsewhere, contains collections of insects, woods, shells, eggs, stuffed birds, and pressed plants, which are much used for illustration. A Mountjoy Natural History Chart with colored plates of birds and other animals also belongs to the department.

Geological Laboratory.

This laboratory occupies the east end of the second floor of Rankin Hall of Science. The equipment includes maps, charts, globes, and rock, mineral, and fossil specimens. Among these are thirty-five folios of the Geological Atlas of the United States; the Topographical Atlas of the United States; the Geological Atlas of Wisconsin, the Daily Weather Maps, and a collection of fifteen hundred rocks, minerals, and fossils.

A voluntary observer's station in connection with the United States Weather Bureau has been established recently at Carroll College under charge of this department. For this work the government has furnished an instrument shelter, maximum

and minimum thermometers, and a rain gauge. These are used for meteorological study.

Mineralogical Laboratory.

The laboratory is equipped with several hundred hand specimens of minerals and crystals for work in descriptive mineralogy. The equipment also includes celluloid and wooden models of crystals and goniometers for the study of crystallography. The necessary apparatus, reagents and minerals in bulk are provided for blow pipe analysis.

Museum.

The museum occupies a room, 53x60 feet, on the third floor of Rankin Hall of Science. The room has now eight upright wall cases, each eight feet long. These contain the following collections:—

A collection of mounted birds, nearly all native in Wisconsin, the gift of Mr. James Miller of Shawano, Wis.

A collection of birds' eggs, a gift from Mr. T. W. Haight.

The Park Herbarium, presented by Mr. Frank Park, and containing about a thousand pressed and mounted specimens.

A collection of native Wisconsin woods mounted in a special case, a gift from Mr. Frank Park.

A collection of several hundred varieties of shells, presented by Mrs. S. M. Quaw of Wausau, and others.

About fifteen hundred specimens of rocks, minerals and fossils.

A considerable collection of Indian relics.

A number of mounted vertebrates.

About fifty placques of mounted insects, showing habits and life histories.

These collections are used for class room illustration as well as for display. It is the purpose to add to the museum material each year as rapidly as possible. Either gifts or loans of valuable collections will be appreciated.

Library.

Voorhees Library of Carroll College is supported by an income from the sum of twenty thousand dollars given for the

endowment of the library by Mr. and Mrs. Ralph Voorhees of New Jersey, and by special appropriations. The books are carefully selected with special reference to the needs of the several departments. They are catalogued and arranged according to the Dewey system of classification. The collection includes over seven hundred bound volumes of leading periodicals which are of value in reference work through the aid of "Poole's Index" and "Reader's Guide to Periodical Literature." These files will be completed as soon as possible. The library is well supplied with standard works of reference. Reserve shelves are provided on which are placed books for special readings assigned by the various professors.

The reading-room is a large well lighted room, tastefully decorated, and furnished in mission style. Reading tables are abundantly supplied with daily and weekly papers, current magazines, literary reviews, and scientific journals.

The library is open for reading and study from 9 A. M. to 5 P. M. on recitation days and from 9 to 12 A. M. on Saturdays. Students have free access to the shelves and are permitted to draw books by complying with customary library restrictions. In the preparation of orations and debates the facilities of our library may be supplemented by those of the very complete public library of Milwaukee and of the Carnegie Library of Waukesha to both of which our students have access.

Elizabeth Voorhees Dormitory for Women.

This new building is the gift of Mr. and Mrs. Ralph Voorhees, and, at the request of her husband, is named in honor of Mrs. Voorhees. It is a model of beauty and architectural skill. It was planned after a careful study of the most modern dormitories elsewhere, and in comfort and convenience can not be surpassed. Like the other new buildings it is of the famous Waukesha limestone. Each floor has spacious halls and is amply supplied with lavatory facilities, and the entire building is heated by steam and lighted by electricity. It is thoroughly up-to-date in all its details, with the appointments of a cultured home. The building has accommodations for eighty girls. Most of the rooms are intended for a single occupant,

ELIZABETH VOORHEES DORMITORY.

but some of larger size are designed for two people, and there are a few suites consisting of parlor and two bed-rooms.

The dining room is large and cheery, and will accommodate one hundred and sixty persons. It is practically a college commons, many of the young men taking their meals there, a separate entrance and waiting-room being provided. On the first floor of the dormitory is a large reception room with parlor adjoining, and suites of apartments for the dean and matron.

The domestic department is superintended by a competent, experienced matron. The Dean of Women presides over the social life and is responsible for the physical and moral welfare of the young women in the home. The dean and the matron are both cultured Christian women who have had long experience in dealing with girls and who respond quickly to all their needs. Everything is done to surround the student with helpful, stimulating influences. There is no unnecessary or annoying surveillance; only such restraints are imposed as are needed to give the atmosphere of a well ordered home, and to help the young women to exercise self-control and to develop well balanced Christian characters.

Voorhees Cottage.

Voorhees Cottage,—like others of the college buildings, the gift of Mr. and Mrs. Ralph Voorhees,—is the residence of the President of the college and is intended as a college home, the center of the life of the college. It is at once beautiful, and convenient in all of its arrangements.

Admission and Graduation.

To enter the freshmen class of the college, students must have completed the course outlined for the academy, or its equivalent in other schools. Testimonials of good moral standing will be required from those who are not personally known to the authorities of the college.

Admission by Certificate.

Graduates of accredited schools will, on presentation of a certificate signed by the principal or superintendent, or other authorized officer, be given credit without examination for the work done. Blank forms of application for admission may be secured at any time by addressing the Registrar. These should be filled out and returned by September sixth.

Admission by Examination.

Candidates for admission to the freshman class coming from high schools not accredited, or having credits that are not entirely satisfactory, may have the privilege of proving themselves worthy of entrance by taking a written examination. Such examination will be appointed for Monday of registration week.

The courses outlined in the High School Manual of the State of Wisconsin represent in general the character of the work required for admission.

Requirements for Admission.

For unconditional admission to the freshman class of Carroll College, candidates must offer a total of fifteen units selected from the following list, the required units being:

English: three units.
Mathematics: three units.
History: one unit.
Science: one unit.
Foreign Language: two units.

English.

(a) Review of English Grammar. Composition: simple narratives and descriptions. Literature: English classics. 1 unit.

(b) Composition: Narratives and descriptions based upon writer's experience and observation, or upon texts read in class. Literature: English classics. 1 unit.

(c) Rhetoric and composition. Literature: English classics. 1 unit.

(d) Composition. Literature: History of English and American literatures. Classics. 1 unit.

Greek.

(a) Gleason's Greek Primer; Xenophon's *Anabasis*, Book I, chapters 1-5. 1 unit.

(b) Xenophon's *Anabasis* to the end of Book IV; Homer's *Iliad*, Books I-III; Prose Composition. 1 unit.

German.

(a) Bacon's *German Grammar;* Spanhoofd's *Lehrbuch der deutschen Sprache;* Storm's *Immensee;* or equivalent texts. 1 unit.

(b) Bernhardt's German Composition; Freytag's *Die Journalisten;* Goethe's *Egmont* or Schiller's *Wilhelm Tell;* sight reading of easy fiction. 1 unit.

French.

(a) Ability to read French correctly, to put simple English sentences into French, and thorough familiarity with the essentials of grammar. 1 unit.

(b) Ability to read at sight modern French of average difficulty, chosen from nineteenth century literature. This should cover about one thousand pages. 1 unit.

Latin.

(a) Elementary Latin; inflections and constructions. Translations and elementary prose. Outline of Roman History. 1 unit.

(b) Latin Grammar. Caesar's *Commentaries*, four books. Latin Prose, twenty lessons. 1 unit.

(c) Cicero, five orations and selected letters. Latin Prose completed. 1 unit.

(d) Vergil's *Aeneid*, six books; Mythology. 1 unit.

Mathematics.

(a) Algebra, through simple quadratic equations. Special attention should be given to the use of symbols of grouping, factoring, fractions, simple linear equations and systems of equations with careful analysis of easy problems solved by them, the solution of the quadratic equations and problems involving them, and such theorems in surds and imaginaries as are necessary in the treatment of the quadratic. 1 unit.

(b) Plane Geometry as given in Wentworth or an equivalent text, with original problems. 1 unit.

(c) Solid Geometry, including spherical, with easy original problems. ½ unit.

(d) Algebra. Review of the work of the first year with advanced work in ratio, proportion and variation, the progressions, binomial theorem, the graph and logarithms. ½ unit.

Science.

(a) Physics. One year's work in elementary physics, such as is covered by the standard elementary text-books. At least one-half of the work should consist of laboratory exercises. The laboratory note book, approved by the instructor under whom the work was done, should be presented by candidates for admission. 1 unit.

(b) Chemistry. General chemistry, recitations and laboratory work throughout the year. The ground covered should be that of the best chemistry text-books, such as Remsen's Briefer Course. The laboratory note book, approved by the instructor under whom the work was done, should be presented. 1 unit.

(c) Zoology. One year's study of animal structures, habits, and general life history will be accepted, provided that

laboratory practice and field work have formed part of the course. Laboratory drawing books must be presented. 1 unit.

(b) Botany. One year's work in structural and systematic botany. Laboratory practice and field work must form an important part of the course. At least 100 hours should be given to laboratory work, besides field work. 1 unit.

(e) Physiography. One year's work. The recitation work should be supplemented with the making and study of maps, and with field work. Tarr's *Elementary Physical Geography* or an equivalent text is suggested. A portion of the course, from one-fourth to one-half, may include Commercial Geography. 1 unit.

(c), (d) and (e) may be presented in half units.

History.

(a) Ancient History to the year 800 A. D., with special reference to Greek and Roman History. 1 unit.

(b) Mediaeval and Modern History from 800 A. D. to the present time. 1 unit.

(c) A general course in American History or English and American History. 1 unit.

(d) American History and Civics. 1 unit.

Admission to Partial Courses.

Those who are not candidates for a degree may, without examination, enter any class for which they may be found fitted, and thus pursue a partial course. If at any time such students should become candidates for a degree it will be necessary for them to satisfy the entrance requirements.

Students entering college with conditions in preparatory work must first arrange to remove such conditions. While removing conditions students may take such college work as they may be able to carry, but to be considered in regular college standing they must take at least eleven hours of college work.

Registration.

Tuesday of the opening week of the college year is registration day. By special arrangement, registration may be made before that day. For the second semester students must register during the last week of the first semester.

On registration day the student will present himself to the Dean and Registrar of the college, who will receive his certificate or other credentials from the school last attended, and assist him in selecting his course of study for the semester. No assignment to classes shall be made, however, until the student has presented to the Dean a matriculation card signed by the acting treasurer of the college and indicating that his tuition for the semester has been provided for. Failure to register at the appointed time will subject the delinquent to a special registration fee of one dollar.

Admission to Advanced Standing.

Students presenting a certificate of honorable dismissal from other colleges and a definite statement of the amount of work done and the credit received for it may be admitted to advanced standing; but the amount of credit given for the work will depend upon the ground covered and the time spent, and is subject to the judgment of the instructors in the several departments. No college credit will be given for work done in secondary schools except on examination.

Relation to the University of Wisconsin.

An agreement has been entered into with the University of Wisconsin whereby both institutions have the same entrance requirements and the same list of accredited schools. Students who change from one institution to the other will be given the rank of sophomores or juniors, if the change is made at the end of the first or second year of their work. It is not advisable for students to make a change at the end of the junior year, but where such cases occur they will be dealt with on their individual merits. Students who include in their full course at Carroll our pre-engineering group of studies can enter the engineering department of the University of Wisconsin and complete a technical course in two years. Those

who enter before graduation will be given the same credits as students who transfer from the College of Letters and Science of the University to its engineering department.

Student Advisers.

At the beginning of the year each student is assigned to a member of the faculty who acts as his advisor, and keeps in touch with his work in all departments. The adviser may be consulted by the student in reference to anything connected with any of the varied interests of a college student's life, and will transmit to the faculty any request of the student concerning his work that requires a vote of the faculty.

Requirements for the Degree of Bachelor of Arts.

The college year is divided into two semesters. One hour of recitation or lecture per week, for one semester, is designated a unit hour. Two hours of laboratory work or two hours of prescribed physical exercise in the gymnasium are credited as one unit hour. Students are expected to take thirty-two unit hours per year during the freshman and sophomore years, two of which may be class work in physical exercise. For the degree of Bachelor of Arts a total of 124 unit hours is required, four of which may be prescribed physical exercise.

No student will be permitted during one semester to receive a credit toward graduation of more than sixteen unit hours in regular studies except by permission of the faculty, obtained in advance. Students are not allowed to receive credit for more than eighteen unit hours in any one semester.

No student shall receive a bachelor's degree until he shall have been in residence at least one year.

The 124 unit hours of recitation, lecture, and laboratory work required for graduation include:

(1) Courses required of all candidates for a degree;
(2) Courses in the major subject; and
(3) Elective courses.

1 Required Studies.

(a) English: six unit hours, to be taken in the first year.

(b) Language: sixteen unit hours for those who offer at least three years of preparation, and twenty-four unit hours for those who offer only two years of preparation.

(c) Bible: eight unit hours.

(d) Philosophy: six unit hours.

(e) Mathematics: six unit hours.

(f) History: eight unit hours.

(g) Natural Science: ten unit hours, to consist of a one-year course in either Biology, Chemistry, or Physics.

2 Major Study and Thesis.

Major study: At the beginning of the sophomore or junior year each student shall select as his major subject the work of some one department in the college. This department will determine the manner in which the work of the major shall be completed; the work required in the major (including thesis and required work) shall not be less than twenty unit hours, nor more than forty unit hours, the credit for the thesis being four hours. Any one of the following subjects may be chosen as a major: Philosophy; History; English; Biology; Mathemathics; German; Latin; Chemistry; Physics.

Thesis: Candidates for a baccalaureate degree may be required to present a graduating thesis, the subject of which must be approved by the head of the department in which the candidate is doing the work represented by the thesis. The thesis must represent some phase of the student's work in his major study, and must have the character of a scholarly dissertation on the subject. The thesis must be typewritten and bound according to specifications furnished by the Librarian of the college. It must be deposited in the college library by June 1st. Before the thesis is accepted, it must be approved by the head of the department under whom the work has been done. When accepted, the thesis becomes the property of the college.

3 Electives.

All work not included under 1 and 2 is elective, but credit toward graduation shall not be given in one department for more than forty unit hours, including required work, major and electives. Not more than seventy hours credit may be received in the subjects included in any one of the following groups:

1	2	3	4
English	Biology	History	Psychology
German	Geology	Political Science	Education
Latin	Chemistry	Political Economy	Ethics
French	Mineralogy	Sociology	Philosophy
Greek	Physiology		Logic
	Physics		

Failures and Conditions.

Any course dropped without faculty consent obtained in advance shall be counted a failure in that course. When a student has failed or has been conditioned in a subject the work should be completed at as early a date as possible, and such work must take precedence over elective or advanced work. All failures and conditions must be made up before a degree will be granted.

Studies of the Freshman Year.

At the beginning of the freshman year each student shall elect, in consultation with the student adviser, one of the following groups of studies for the year's work:

I		II		III	
English	3	English	3	English	3
Mathematics	4	Mathematics	3	Mathematics	3
German	4	Latin	5	Latin	4
History	4	History	4	Greek	5
Bible	1	Bible	1	Bible	1

IV		V		VI	
English	3	English	3	English	3
Mathematics	3	Mathematics	3	Mathematics	3
Latin	5	German	4	German	4
German	4	Chemistry	5	Biology	5
Bible	1	Bible	1	Bible	1

(The figures following the names of the subjects indicate the number of unit hours for each semester.)

The Sophomore, Junior, and Senior Years.

Each student who chooses his major subject at the beginning of the sophomore year shall outline at that time, in consultation with the head of the department in which he selects his major work, his course of study for the sophomore, junior, and senior years. The course may be changed at any time by the consent of the head of the department and the Dean.

Suggested groups of studies are outlined after the description of the courses in the various departments in which major work is offered.

Requirements for the Degree of Bachelor of Science (in Chemistry).

The requirements for admission to the Course in Chemistry are the same as they are for the courses leading to the degree of Bachelor of Arts, with the exception that elementary physics is required for entrance.

For graduation 136 unit hours of lecture, recitation, and laboratory work are required.

Four units of prescribed work in physical culture may be offered toward graduation.

The required subjects are:

Chemistry, including chemical thesis, forty-eight unit hours.
Physics, ten unit hours.
Mathematics, including mechanics, sixteen unit hours.
Mineralogy, six unit hours.
Geology, five unit hours.
English, six unit hours.
German, twelve unit hours.
Mechanical Drawing, four unit hours.
The Bible, eight unit hours.

No student may receive more than fifty-eight unit hours credit in chemistry toward graduation.

A synopsis of the Course in Chemistry may be found on page 35.

Preparation for Professional Courses.

By a careful combination of the major system and required studies, Carroll College aims to secure two results for her

students: to give that breadth of culture, extent of information, and training of the mental powers needed as a basis for all lines of activity; to provide for each student the opportunity of becoming well acquainted with some field of knowledge that will specially prepare him for any line of professional study that he may intend to take up. To this end a number of suggested groups of studies have been outlined and placed after the descriptions of courses offered by the various departments.

Teaching.

The departments of Education and Philosophy offer a number of courses which are especially adapted to the needs of those who intend to enter the profession of teaching. The student that expects to obtain a thorough preparation for teaching any particular subject should choose that as his major study. Special teachers' training courses are offered by the various departments of instruction. These courses, together with the professional courses offered by the department of Education, form an important part of the groups of studies suggested for those who desire to prepare for teaching. For these groups the student is referred to the description of courses in the various departments.

The school laws of Wisconsin provide that graduates of colleges whose courses of study are fully and fairly equivalent to corresponding courses in the University of Wisconsin may receive an unlimited state certificate upon recommendation of the State Board of Examiners. Acting under this provision the State Board has granted state licenses to the graduates of Carroll College. The teachers' course offered here is carefully planned to include all branches of study required by the state.

Medicine.

The departments of Biology and Chemistry offer a number of courses which will be of great value to the student who enters a medical college. The laboratories of these departments are well equipped and the courses offered are designed to give the student a working knowledge of these sciences. By

proper coordination of his work here with that of the Medical Department it is possible for the student to shorten the total number of years required to obtain the degrees of Bachelor of Arts and Doctor of Medicine. Groups of studies which are suited to the needs of the pre-medical students are described in connection with the courses in biology and chemistry.

Law.

Students who expect to study Law should do their major work in the department of History and Political Economy. The newly established department of Sociology also offers courses which will be of especial value to the student of law. For suggested groups the student who contemplates the study of Law is referred to the statement of the department of History and Political Economy.

Theology.

Students who expect to enter the ministry should have, in addition to a knowledge of the Bible, the classics, moral philosophy, psychology, and history, an intelligent understanding of the laws of God as manifested in the material universe. The only way that a thorough acquaintance with nature and her laws can be obtained is by a study of the fundamental sciences. Courses in theology do not form a part of the college curriculum, but work especially adapted to the prospective student for the ministry will be offered by the department of sociology. Groups of studies adapted to individual needs will be arranged by the head of the department under whom the student chooses to do his major work.

Engineering.

Students who expect to study engineering should do their major work in mathematics and physics or pursue the Course in Chemistry. The courses offered in the college include the mathematics, the fundamental sciences, and the modern languages, which form an important part of all engineering courses. More technical courses, especially adapted to the engineering student, are offered in mechanical drawing, descrip-

tive geometry, surveying, industrial chemistry, bacteriology, mineralogy, mechanics and electrical measurements.

A young man can acquire by a course in Carroll College much information that is fundamental to all engineering courses, and so materially shorten his professional course, at the same time securing that culture, general information, and mental discipline which are so essential to men who are to be agents in the betterment of society, no matter in what line of work they may engage.

Many youths incline toward one or another of the technical callings, but do not wish to decide finally and at once. They may pursue a course of study which will serve as preparation for the preferred profession, but which will also count toward a different goal if their plans should change as they grow older and become better informed.

Course in Chemistry.

The great demand for technical instruction in the college, together with the large opportunities open to the trained chemist in the manufacturing industries, has led to the establishment of a Course in Chemistry. It is the aim of the course to fit students for practical work as chemists in manufacturing establishments or technical laboratories. Executive positions in chemical manufactories are frequently filled by chemists who show marked ability for that kind of work. Graduates are fitted to enter upon graduate work in chemistry, to teach chemistry, or to take paid positions as chemists immediately upon graduation.

Suggested Outline of Course in Chemistry.

FIRST SEMESTER.

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Bacteriology or Mechanics	5
English	3	German	2	Mineralogy	3	Chemical Thesis	2
German	4	Bible	1	French	4	Bible	1
Bible	1	Mechanical Drawing	2	Bible	1	Elective	
				Elective			

SECOND SEMESTER.

Freshman.		Sophomore.		Junior.		Senior.	
Chemistry	5	Chemistry	7	Chemistry	5	Chemistry	5
Mathematics	5	Physics	5	Mathematics	3	Chemical	
English	3	German	2	French	4	Thesis	2
German	4	Bible	1	Bible	1	Bible	1
Bible	1	Mechanical		Mineralogy	3	Geology	5
		Drawing	2	Elective		Elective	

University Scholarship.

The faculty of Carroll College is authorized by the University of Wisconsin to appoint each year a member of the senior class of the college to a graduate scholarship in the university. This scholarship affords the incumbent an income of $225 annually.

RANKIN HALL OF SCIENCE.

Departments of Instruction.

The work of the college is organized under the following Departments of Instruction:

Biblical Literature.
Biology.
Chemistry.
Education.
English.
Geology.
Greek.
History and Economics.
Latin.
Library Science.
Mathematics.
Modern Languages.
Philosophy.
Physics.
Public Speaking and Dramatic Literature.
Sociology.

BIBLICAL LITERATURE.

President Carrier; Mrs. Carrier.

The English Bible is made a text-book in the college, and the aim of this department is to familiarize the students with the Scriptures, giving them a good general knowledge of the history and teachings of the Bible. The courses are so arranged that in four years the whole Bible may be covered. Many portions of the Old and New Testaments are studied carefully, while those of seemingly less importance are passed over hurriedly. Students are encouraged to ask questions, and difficult problems are freely discussed with the purpose of encouraging more independent thought and a firmer faith. Thorough and careful study is required and credit given toward graduation. Bible truth, and not denominationalism, is the subject of study. The American Standard Revision is the text used for class room work.

In the Academy Department the Badger prizes are awarded for the best essays on subjects pursued, the assignment being made by the instructor. Any academy student may enter into this competition. The prizes are distributed as follows: First prize, four dollars; second, three dollars; third, two dollars; fourth, one dollar.

1 a The Life of Christ.

The life of our Lord is so studied as to help the student to a clear and intellectual conception of Jesus as He is portrayed in the Gospels. The contents of the four Gospels are carefully studied.

First semester. One hour.

b Apostolic History.

This is a study of the external and internal growth of the Christian Church as it is portrayed in the Acts of the Apostles. The Bible is used as the text-book.

Second semester. One hour.

2 The Books of the Pentateuch.

First and second semesters. One hour.

3 a The Pauline Epistles.

Four or five of the principal epistles of Paul are studied. The date, occasion, and purpose of writing are discussed.

First semester. One hour.

b Catholic Epistles and Revelation.

Second semester. One hour.

4 a Historic Books of Old Testament.

A general survey of the history of the Hebrew people from Joshua to Nehemiah.

First semester. One hour.

b Old Testament Prophecy.

Several prophetic books are taken up in detail in their chronological sequence. Particular attention is paid to the his-

toric setting of these prophecies, their vital relation to the life of those to whom they were addressed, and the elements of moral and spiritual truth which they convey.

Second semester. One hour.

BIOLOGY.

PROFESSOR PLOWMAN.

The two-fold science of Biology, with its various specialized phases of medicine, surgery, sanitation, agriculture, forestry, and the like, stands in fundamental and intimate relation to all such liberal culture subjects as psychology, sociology, economics, and history, and hence it constitutes an essential element in any liberal educational scheme.

After the general course of the freshman year, the work of this department naturally diverges along the two lines of phytology and zoology. The phytological line leads to the special fields of bacteriology, sanitation, agriculture, forestry, etc. The zoological line leads to animal anatomy, physiology, hygiene, surgery, and medicine. It should not be inferred from this that the work of this department is technical and highly specialized. On the contrary, no hard and fast boundaries are recognized as limiting the student of biology, but rather is he encouraged to follow out to its ultimate answer every reasonable question pertaining to the problem of life.

The department is well housed in convenient and well-lighted rooms on the second floor of Rankin Hall. The equipment is modern, and ample for the work offered. See the description of laboratories on page 19.

Major work in this department must include at least thirty units, of which courses 11 and 22 should always form a part. The advanced work may take either the phytological or the zoological trend. For laboratory fees, see the statement of general expenses.

11 General Biology.

It is the purpose of this course to lay a broad foundation for more advanced work in the department, and at the same

time to supply a well-rounded body of useful information to those students who may not choose to carry their studies farther in this line. In order to accomplish this double purpose, the work begins with the consideration of the lowest types of living things, and progresses in systematic order to the higher forms. Animals and plants are studied in parallel groups throughout the year; thus are emphasized the essential unity and the progressive divergence of the two kingdoms of life forms. The greater part of the time in this course is devoted to the study of non-flowering plants and invertebrate animals, though the higher forms are studied sufficiently to make clear their essential charactertistics and their relation to the lower groups.

This work consists of three lectures and four hours of laboratory work each week, reports on reference reading, and occasional field trips. The lectures are based on the texts of Parker and Haswell, Strasburger, Warming, and others. No previous training in biology is required.

Open to all college students.

First and second semesters. Ten hours.

12 Anatomy, Histology, and Physiology of Vertebrates.

This work is specifically planned to meet the demand for a pre-medical course along rather broad zoological lines. The comparative anatomy of vertebrate animals is presented in such a way as to afford a comprehensive foundation for the accompanying study of physiology. For a similar purpose the subject of animal histology is treated in a general way.

As a basis for the lectures, reference reading, and laboratory work of the course, free use is made of such standard works as those of Gray, Flint, Klein, Dahlgren, and others. While this is definitely a pre-medical course, yet it is presented in a manner not unduly technical, and it should prove to be of great value to prospective teachers and others not preparing for the medical profession. Previous training in biological lines, though not imperatively required, is extremely helpful as a preparation for this course.

First and second semesters. Ten hours. Given in alternation with course 13. Omitted in 1910-1911.

13 Anatomy, Physiology, and Oecology of Vascular Plants.

This course is a more advanced consideration of the structure, functions, uses, and relationships of vascular plants. The agricultural and economic phases of the subject are made prominent. Large numbers of photomicrographic and other lantern slides, and an extensive collection of microscope slides and preserved materials are available for this work. The course is based upon the works of Strasburger, Vines, Detmer-Moor, Clements, and many others. Either Biology 1 or Biology 11 will serve as an introduction to this course.

Three lectures and four hours laboratory work each week, with extensive collateral reading and a considerable amount of field work. Given in alternation with course 12. Offered for 1910-1911.

First and second semesters. Ten hours.

16 General Embryology and Ontogeny.

A rapid review of the processes of reproduction and development throughout the vegetable kingdom and lower groups of animals, followed by a more complete study of the embryology of vertebrate animals. Illustrated lectures, reference reading, and laboratory work. The greater part of the time in the laboratory is devoted to a study of the development of the chick. This course should be preceded by Biology 1 or Biology 11. Two lectures and three hours laboratory work per week.

First semester. Three hours. Given in alternate years. Omitted in 1910-1911.

17 Biological Technique.

A practical consideration of the approved methods of collection and preservation of biological materials, and of their preparation for laboratory use; microtome technique; manipulation of the microscope; technical photography and the making of lantern slides. Lectures and laboratory practice.

First semester. Two hours. Given in alternate years. Omitted in 1910-1911.

18 Conservation of Natural Resources.

A popular presentation of a subject which is rapidly forcing itself upon the attention of statesmen and political economists. This may be considered as primarily a liberal culture course, and it is especially recommended to students who are not particularly interested in biological and geological subjects. Open to all college students. Illustrated lectures and a limited amount of reference reading.

Second semester. Two hours. Given in alternate years. Omitted in 1910-1911.

20 Bacteriology and General Pathology.

The instruction in this course aims only to introduce the student to this vast and increasingly important field. A brief survey of the history of bacteriology is followed by a careful study of the general technique, together with practice in the sterilization of apparatus, preparation of media, and the cultivation and examination of a few common bacterial forms. Special attention is given to the economic and hygienic importance of bacteria, and to their rôle in disease, both of plants and of animals. This course is of fundamental importance in both of the professional trends of biology, and hardly less valuable as a liberal culture study, while to the teacher of biology it is a practical necessity. Biology 11 should precede this course.

Two or three lectures and six hours of laboratory work per week. Given in alternate years. Offered for 1910-1911.

First semester. Five hours.

21 Organic Evolution.

A somewhat critical study of the great doctrine of Organic Evolution, together with a rapid survey of its history from Aristotle to the present. This is followed by a general inquiry into the bearing of this subject upon other fields of thought. This is primarily a liberal culture course, and it is especially recommended to prospective teachers and ministers, as well as to all students interested in biology.

Copiously illustrated lectures, reference reading, and class discussions. Either Biology 1 or Biology 11, and Geology 11 should precede this course.

Second semester. Two hours. Given in alternate years. Offered in 1910-1911.

22 Thesis Course.

Students who choose their major work in the department of Biology will be required to submit a thesis, based upon original work of scientific merit, in either phytology or zoology. Ample facilities are provided for this work, in the way of equipment and standard works of reference. The special topic for this course must be selected at least one year prior to graduation, and the candidate should have had at least as much previous training in biology as is represented by courses 11, 12 or 13, and 17.

Not less than five hours, and not more than ten hours.

Suggested Groups with Major in Biology.

1		2		3	
Biology	30	Biology	30	Biology	30
Geology	6	Chemistry	20	Physics	10
Mathematics	6	Mathematics	6	Mathematics	6
English	6	English	6	English	6
Philosophy	6	Philosophy	6	Philosophy	15
German	16	German	16	German	16
French	8	French	8	French	8
Chemistry	15	Bible	8	Chemistry	10
Physics	10	History	8	Bible	8
Bible	8	Physics	10	History	8
History	8	Electives	6	Electives	7
Electives	5				
	124		124		124

Students who desire to pursue special lines of agriculture will find that group 1 is well adapted to their needs.

Group 2 is planned to meet the wants of pre-medical students, and group 3 for prospective teachers.

CHEMISTRY.

PROFESSOR HOPKINS.

The courses in chemistry are designed to meet the needs of three classes of students: those who wish to gain an elemen-

tary knowledge of the subject as a part of a general culture course; those who intend to study medicine or to pursue some technical application of science; those who intend to take up chemistry as a profession and so desire a broad foundation for advanced study. The subject matter of chemistry is of fundamental importance in everyday life and consequently forms an important part of a liberal education. For students intending to study medicine or engineering, a good knowledge of chemistry is necessary. Such students may well do major work in chemistry. Satisfactory completion of the courses outlined below will enable the graduate to enter universities or technical schools as a candidate for advanced degrees; to take up remunerative work as a technical or analytical chemist; or to engage in teaching chemistry. The requirements for a major in chemistry are, in addition to the thesis, thirty unit hours as a minimum. Courses 11, 12 and 13 are required of all who do major work in chemistry. Course 11 should be taken in the freshman year. Students who enter course 11 are expected to present credit for one year's work in elementary physics.

In the courses in chemistry especial emphasis is placed upon the experimental side of the science. Students are encouraged to learn facts by experiment, to verify the statements of the text, and to become investigators from the beginning.

11 General Chemistry.

The course consists of experimental lectures together with recitations and laboratory work on the chemical elements, their compounds, and the laws underlying chemical action. *First semester*: A systematic study of the history, occurrence, preparation, properties and compounds of the non-metallic elements. The fundamental principles, laws, and theories of chemistry are discussed at length. Especial emphasis is laid upon chemical notation, nomenclature, and terminology. *Second semester*: A continuation of the work of the first semester. Tests for the common acids; the occurrence, extraction, compounds, tests and separations of the metals; classification of the elements according to the periodic law; preparation of pure salts. Ac-

curacy, neatness and honesty in the laboratory work are insisted upon.

Four recitations, and six hours laboratory work throughout the year. Ten unit hours. M., Tu., Wed. and Th., 10:45. Laboratory, Tu., Wed. and Thu., 2:10—4.

12 Qualitative Analysis.

A laboratory course in the detection and separation of inorganic substances. The reactions of the common metals and acids are studied. Especial attention is given in the recitations and lectures to the principles involved in the laboratory work. The theories of solution, precipitation, reduction, oxidation, mass action and chemical equilibrium are emphasized. Each student is required to identify a number of unknown substances, including simple salts, mixtures, alloys, minerals, and rare metals. A few exercises in quantitative analysis are also required. Prerequisite: course 11, or its equivalent.

One recitation or lecture and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50; Sat., 8—12.

First semester. Five unit hours. Given in 1909-1910, and alternate years.

13 Elementary Quantitative Analysis.

A laboratory course involving the general methods of gravimetric and volumetric analysis, and the preparation of pure salts. Each student determines gravimetrically a number of typical elements in pure salts, alloys and minerals. The latter part of the course is devoted to volumetric analysis. The determinations are carefully selected and are designed to give the student a wide range of typical methods of quantitative manipulation. A careful study is made of acidimetry and alkalimetry and the oxidation, reduction and precipitation methods of quantitative analysis. Much attention is also given to problems in stoichiometry. Prerequisite: course 12.

One recitation and twelve hours laboratory work.

Second semester. Five unit hours. Hours the same as those of course 12. Given in 1909-10, and alternate years.

14 Quantitative Analysis.

This course is intended to give a more comprehensive knowledge of quantitative methods than can be obtained in an elementary course. The work consists in the analysis of alloys, minerals, rocks, cement, fuel, iron and steel, gas, and other technical products. The laboratory work is varied to meet the needs of individual students. Prerequisite: course 13.

Two lectures and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50; Sat., 8—12.

First semester. Five unit hours.

15 Proximate Organic Analysis.

Sanitary and mineral analysis of water; soil analysis; food analysis; analysis of soaps, oils, paints, dairy products, fertilizers, and other technical products. The laboratory work is varied to meet individual needs. Prerequisite: course 13.

Two lectures and twelve hours laboratory work. M., Tu., Wed., Th., 8—9:50; Sat., 8—12.

Second semester. Five unit hours.

16 Organic Chemistry.

Systematic study of the aliphatic and aromatic compounds of carbon. Recitations and lectures with regular written reviews. Laboratory work in preparing representative compounds of the important series of organic compounds and their identification.

Four recitations and six hours laboratory work.

First semester. Five unit hours. Given in 1910-11, and alternate years.

17 Theoretical and Physical Chemistry.

Lectures, recitations, laboratory work, and collateral reading. The lectures give an elementary but systematic view of the subject of physical chemistry. The following subjects are studied in the class room and laboratory: atomic and molecular weight determination, the periodic law, chemical dynamics, speed of reaction and mass relations, specific gravity

determinations, melting and boiling points, solubility, Faraday's law, gas laws, electrical conductivity, phase rule, specific heat, calorimetry, spectrum analysis, and photo-chemistry.

Prerequisites: courses 12, 13, and 16, and elementary physics. This course follows course 16, the two making a complete year's work. Course 16 occupies about 20 weeks and course 17 the remainder of the year.

Four lectures or recitations and six hours laboratory work.

Second semester. Five unit hours. Given in 1910-11, and alternate years.

18 Research Work and Thesis.

Students who make chemistry their major study or who are candidates for the degree of Bachelor of Science in Chemistry are expected to select some line of work for careful investigation. The results of the research are presented in the form of a thesis, which must conform to the requirements given on page 30. The line of work selected in course 15 should be correlated with the subject chosen for a thesis.

Credit according to the amount and quality of work done. A thesis must represent the work of at least four unit hours.

19 Teachers' Course.

This course consists of reports upon assigned topics, and recitations, conferences, and discussions of problems pertaining to the teaching of chemistry. It is pursued in connection with course 17, department of Education. Prerequisite: courses 11, 12, and 13.

Second semester, at hours to be arranged. Credit in proportion to the amount of work done.

20 Industrial Chemistry and Metallurgy.

Lectures and recitations: the chemical industries; raw materials; machinery and appliances; methods of manufacture; products, such as glass, porcelain, caustic soda, sodium carbonate, sulphur dioxide, sulphuric acid, the cyanides, gas and coke, mineral and vegetable oils, alcohol, pigments, dyes, cement, fertilizers, paper, the metals. A survey of the applica-

tions of chemistry to manufacturing industries. During the course the students make a number of trips of inspection to important manufacturing plants in Milwaukee and vicinity. These trips are personally conducted by the head of the department and form an important part of the work of the course. Prerequisites: courses 11, 12, and 13. It is recommended that students carry this course in connection with courses 12 and 13.

Two recitations. Tu. and Thu. at 9:50.

First and second semesters. Four unit hours. Given in 1909-10, and alternate years.

21 History of Chemistry.

This course is conducted as a seminar and aims at a systematic development of the historical side of the subject. Each student is expected to make reports upon assigned topics and to enter freely into discussions concerning chemical theories of the past and present. The course is open to juniors and seniors.

First and second semesters. Two unit hours. Given in 1909-10, and alternate years.

22 Food Analysis.

On account of recent state and national legislation, the subject of food analysis is of great interest and importance. This course is offered to meet the needs of those students who desire a more complete knowledge of the subject than is possible from course 15. Laboratory and lecture instruction upon the nutritive value of foods; the detection of adulterations and preservatives; analysis of plant and animal foods; fresh and preserved foods; spices, condiments, drugs, and similar products. The student is expected to select certain lines of work which will prepare him for the responsible position of food chemist. Prerequisite: course 15.

Credit according to amount and thoroughness of the work.

23 Physiological Chemistry.

A study of the foods, of digestion, of the fluids and tissues of the body, and of the urine both in health and in disease.

This course is designed especially for medical students, but it is open to all who have completed course 16.

Two lectures, eight hours laboratory work. Four unit hours.

24 Toxicology.

Lectures upon the poisons, their physiological action, identification, and estimation. The laboratory work consists in the detection of poisons in foods and in the various organs of lower animals. This course is intended primarily for students of medicine.

Credit in proportion to the work done.

Suggested Groups with Major in Chemistry.

1		2		3	
Chemistry	30	Chemistry	35	Chemistry	30
Biology	10	Physics	14	Mathematics	14
Histology	5	Education and Philosophy	10	Physics	14
Bacteriology	5	Physiology	5	Philosophy	6
Physics	10	Mathematics	6	Political Economy	8
Mathematics	8	English	6	History	8
English	6	German	16	English	6
German	16	French	8	German	16
French	8	Bible	8	French	8
Thesis	4	History	8	Bible	8
Bible	8	Thesis	4	Thesis	4
Philosophy	6	Electives	4	Electives	2
History	8				
	124		124		124

Students who expect to pursue chemistry as a profession should take the Course in Chemistry. This is well adapted to the needs of the sanitary, mining, or chemical engineer. Courses 11, 12, 13, 14, 15, 16, 17, 18, and 20 are required of all students who are candidates for the degree of Bachelor of Science in Chemistry. Additional courses may be elected. A detailed outline of the Course in Chemistry is given on page 35.

Group 1 will meet the needs of those who expect to study medicine. In order to secure the maximum value from a medical course the student should have a good knowledge of analytical and organic chemistry before entering a medical school. Courses 11, 12, 13, 16, 23, and 24 are intended to meet the needs of such students.

Group 2 is recommended for students who expect to teach chemistry or chemistry and physics.

Group 3 provides an excellent preparation for students who expect to do graduate work in chemistry.

The groups are subject to alteration.

EDUCATION.

PROFESSOR RAY.

The work in education is designed primarily to meet the needs of those students who are preparing to become teachers in the high schools or superintendents of schools in the state. To this end the work is closely related to the courses offered in the other departments of the college. For those students who elect their major in philosophy and education, the academy offers especial opportunities for observation and practice in teaching under competent supervision and criticism. The courses in education are also open to those who may desire the work for general culture and discipline. The work aims to give, on the one side, a knowledge of the development of the child and of the systems and philosophy of education; on the other, a training in the principles underlying the subject matter of education.

11 Psychology.

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demonstrations.

First semester. Three hours.

16 History of Education.

Education is viewed as a process of conscious adjustment. A study of the typical culture periods as revealed by the educational ideals, processes, and institutions.

First semester. Three hours.

17 Principles of Education.

The meaning of education considered from the standpoint of: (1) biology, (2) psychology, (3) neurology, (4) anthro-

pology, and (5) sociology. Mental development as affected by heredity and environment. Education as affecting the physical, mental, moral, and religious development of the child and the race. The varying educational aims, varying means, and educational values. The relations of the foregoing to the course of study are emphasized. The work of this course includes practice teaching in academy classes of the subjects the student is preparing to teach. The practice teaching is carried on under the direction of the head of the department in which the teaching is being done and under the supervision of the department of Education.

Second semester. Three hours.

18 **Modern Educational Systems.**

A comparison of the educational systems of Germany, France, England, and the United States is made, with the historical setting of each. The differences in economic, social, political, and religious conditions as affecting education are traced.

First semester. Two hours.

19 **Child Study: Mental Development.**

The work covers (1) the theory of development; (2) the general characteristics of development; (3) motor development; and (4) hygiene of development, with special reference to elementary education.

Prerequisite: Philosophy 11.

First semester. Three hours.

20 **Adolescence, and Secondary School Problems.**

This course places special emphasis upon the intellectual and emotional development of the period of adolescence and upon the relations of these topics to the high school curriculum.

Prerequisite: Philosophy 11.

ENGLISH.

PROFESSOR STARR.

In the courses offered by the department of English three objects are contemplated:

(1) A knowledge of the origin and development of the English language.

(2) An acquaintance with English and American literature.

(3) Proficiency in expression.

(1) The language is treated as a vital growth, a living organism, presenting successive stages of development corresponding to the successive stages in the development of the race. (2) The literature is treated as the reflection of the life of the nation, the artistic expression of the intellectual and spiritual forces that have entered into the formation of the national character and institutions. (3) From the study of masterpieces of prose and poetry it is sought to determine correct principles of expression and style, and, by the application of these, to develop the power of clear and effective expression. In general, the study of literature forms a part of the courses in composition, and practice in composition, a part of the courses in literature. Of the courses offered below, 11 and 13 are fundamental, and are intended to lay a foundation for the more advanced elective courses. In any year the particular courses to be given will be determined by the needs of the students desiring to elect work in the department.

11 Rhetoric and Composition.

A study of the forms of discourse; the preparation and criticism of written compositions; and prescribed readings in the masterpieces of English and American prose, as embodying principles of effective expression. The object in all the work is to develop the power of clear and correct expression, to cultivate the sense of literary form, and to present just critical standards. In addition, some time is given to the history of the English language; to the study of words, their etymologies and meanings; and to the subject of bibliography and reference work in the library.

First and second semesters. Three hours.

12 Advanced Rhetoric and Composition.

A study of the forms of discourse. This course is designed to bring the student into contact with the finer elements of style, and, in conjunction with one of the advanced courses in literature, to secure the development and application of correct standards of criticism and expression.

First and second semesters. One or two hours.

13 History of English Literature.

A survey of the development of the English language and of the history of English literature, with study of individual authors and representative works. Moody and Lovett's *History of English Literature*, and Manly's *English Poetry* and *English Prose*, or equivalent texts, form the basis of the work. Collateral reading and individual reports on assigned topics are required.

First and second semesters. Three hours.

14a. Old English.

Anglo-Saxon grammar and reader. Selections from old English prose and poetry. The history of the English language, and the beginning of English culture.

First semester. Three hours.

14b. Middle English.

A continuation of course 14a. This course is devoted to the literature of the fourteenth century, with special attention to the works of Chaucer and Langland, the metrical romances, and the beginning of the drama. It includes the reading of Langland's *Piers Plowman* and Chaucer's *Canterbury Tales*.

Second semester. Three hours.

15 American Literature.

A study of American literature, both prose and poetry, with special emphasis upon its relation to American life and thought, and to contemporary English literature. Consideration of American periodical literature, including the newspaper, forms a part of this course.

First and second semesters. Two or three hours.

16 English and American Essayists.

A consideration of the development of the Essay as a definite literary form, with reading of the works of the principal essayists from the time of Bacon to the present, and attention to the development of English prose style and to literary criticism. Lectures and individual reports.

First and second semesters. Two or three hours.

17 English Poetry of the Nineteenth Century.

Lectures, together with assigned readings and reports on individual topics. A study of the principles of poetics.

First semester. Two or three hours.

18 The Novel.

A survey of the development of narrative literature, with special reference to the modern novel and the short story. Extensive reading and analysis of selected works.

Second semester. Two or three hours.

19 Teacher's Course.

A study of the works required for the college entrance examinations in English. Lectures, papers and class room discussions, and practice teaching. To be taken with Education 17.

For courses in Shakespeare and the Drama, see department of Dramatic Literature.

Suggested Courses with Major in English.

English	24	English	24	English	20	English	20
Dramatic Literature	8	German	16	History	16	Latin or French	16
French or Latin	8	French or Latin	8	Dramatic Literature	8	German	16
German	16	History	8	German	16	History	8
Philosophy	6	Philosophy	6	Mathematics	6	Mathematics	6
History	8	Mathematics	6	Philosophy	15	Philosophy	6
Mathematics	6	Chemistry	10	Science	10	Science	10
Science	10	Biology	10	Bible	8	Bible	8
Bible	8	Bible	8	Electives	25	Electives	34
Electives	30	Electives	28				
	124		124		124		124

GEOLOGY.

PROFESSOR PLOWMAN.

At present only a limited amount of work is offered in this department. The subject is considered primarily in its basic relation to the biological sciences. While no attempt is made to enter to any considerable extent upon the consideration of the more specific and technical phases of this science, yet the course aims to serve as an adequate introduction to this department of knowledge. Accordingly, only essential facts and well-established theories are considered, and breadth of view, rather than matters of details, is the purpose of the course. In addition to its fundamental bearing upon biological problems, the work of this department should be of great value to those who may engage in the teaching of geography and physiography.

The department has quarters on the second floor of Rankin Hall, arranged conveniently for lecture and laboratory work. A large collection of government publications is available for this work. This includes twelve hundred sheets of the Topographic Atlas of the United States; the folios of the Geological Atlas of the United States; the Geological Atlas of Wisconsin; the four-volume work on the Geology of Wisconsin; the publications of the State Geological and Natural History Survey; numerous publications of the United States Geological Survey; and many other reports, maps, and charts.

11 General Geology.

This course consists of a brief general survey of the subject of earth forms, physiography, structural and dynamic geology, and the chief facts of paleontology. The work of the course includes recitations from a text-book, illustrated lectures, reports on assigned reading, section-drawing from geological maps, and laboratory and field study of typical rocks, soils, and physiographic forms. Open to all college students.

Second semester. Five hours. Given in alternate years. Offered in 1910-1911.

Second semester. Five hours.

GREEK.

PROFESSOR FLATTERY; DR. ROGERS.

The Greek department aims to cultivate an appreciation of the value of Greek literature, along with the mastery of linguistic principles. Special emphasis is placed upon sight reading so as to enable the student to read rapidly and thereby to become familiar with the particular style of the different authors. The course is so arranged and varied that topical readings can be assigned to give an insight into the scientific and philosophic spirit that conceived and formulated most of the modern theories of matter and mind, and into the ethical, social, and political conceptions by which the poets, artists, and statesmen of Greece have become the masters of a hundred generations.

11 Elementary Greek.

Grammar. Stress is placed upon the mastery of inflections, sentence constructions, and idiomatic usage, by constant oral drill and written exercises. Xenophon's *Anabasis*, with rapid collateral reading of the Greek Testament.

First and second semesters. Five hours.

12 Greek History.

A thorough study of Xenophon, Thucydides, Herodotus, with selections from Diodorus Siculus, Plutarch, Arrian, and Lucian.

First and second semesters. Four hours.

13 Greek Oratory.

A study of the style, method, and matter of orations of Lysias, Isocrates, Isaeus, Demosthenes, and Aeschines, with reference to Greek courts and jurisprudence.

First semester. Three hours.

14 Greek Poetry.

A study of Homer and Hesiod, with selections from Anacreon and Pindar and from Aeschylus, Sophocles, Euripides,

and Aristophanes, with reference to poetic forms, Greek religion, and dramatic conceptions.

Second semester. Three hours.

15 Greek Science.

This course involves a careful reading of extracts from, and interpretations of, the teachings of Thales and Anaximander, of Xenophanes and Parmenides, of Heraclitus, and of Pythagoras and Democritus, with special reference to modern scientific theories.

First semester. Three hours.

16 Greek Philosophy.

This course presents a study and discussion of the teachings of Socrates, Plato, and Aristotle, with reference to philosophic technology and modern systems of philosophy.

Second semester. Three hours.

HISTORY AND ECONOMICS.

PROFESSOR GANFIELD.

History.

The study of history in a wide sense includes all departments of social life, political, economic, religious, and others. The state is, however, one of the most important features of social development; the study of political life is of very great value to citizens of a republic. While in the following courses, special attention will be given to the political history, the aim will be also to acquaint the student carefully with the social customs and conditions, the industrial pursuits and the religious institutions. By this method it is hoped to make the study itself of great interest and to furnish the student with a better understanding of our present civilization, because many of the customs and institutions, and even the problems, of the present time have such intimate connection with the past that they can be understood only by careful study of their origin and growth. By this method it is hoped as well that

the student may be helped to a more perfect and careful interpretation of the political history itself; for every department of the life of the people is influenced by every other, and the political life and practices of any period can be understood only by noting carefully the history of that people and, as well, their social, industrial, and religious institutions and the influence of these upon their politics. The presentation of the following courses in this department has then these objects: to impress a knowledge of the subject for its own sake; to broaden the view and discipline the memory, imagination, judgment, and sympathy of the student; to discover the origin and growth of both the good and the evil in our modern civilization; so carefully to interpret the past, if possible, that lessons may be drawn from it for the present: in simple, to try to interpret and understand the present civilization in the light of history; and, finally, to give a proper equipment to such students as expect to become teachers of history. The methods of instruction varying somewhat with the different courses, include text-book work, lectures, readings and taking of notes on assigned topics, preparation of theses and essays, map work, and use of original sources.

11 Constitutional, Political, and Social History of England.

This course will be divided into groups of subjects on the basis of the contents of Terry's *History of England.*

a—Teutonic England—The Era of National Foundation.

b—Feudal England—The Era of National Organization.

c—National England—The Era of National Awakening.

(a) The Social Awakening.

(b) The Religious Reformation.

(c) The Political Revolution.

d—Imperial England—The Era of National Expansion.

Special consideration will be given to such subjects as the following:

The Growth of the Parliamentary Constitution and the Rise of Cabinet Government.

The Struggle against Royal Despotism and the Rise of the Commons as a factor in Government.

The Influence and Character of the Renaissance and Reformation.

The Place and Power of Puritanism.

Motives and Methods of English Colonization.

Growth of Democracy and Parliamentary Reform.

Relation of England to Ireland and Home Rule.

Modern Industrial Development.

Gardiner: *Student's History of England.*

Terry: *A History of England.*

Readings and Sources.

First semester. Four hours.

12 Survey of the Colonial, Constitutional, and Political History of America.

Epochs of American History will be used as a basis for the study, supplemented with lectures, readings, etc. Each student will be expected to do a prescribed amount of reading in reference works and to write essays and papers on selected subjects. The study will divide into two main divisions, the first down to 1789, and the second from that date to the present time.

Second semester. Four hours.

13 Mediaeval and Modern Europe.

European History from the Germanic Migrations which broke up the Roman Empire in the West to the Congress of Vienna. Special attention will be given in this course to the history of Germany and France, with lectures and references sufficient to furnish the student with a knowledge of the rise and development of other countries of Europe and of their relation to the progress of civilization. The Religious Reformation and the French Revolution will receive very full consideration, while more than usual attention will be devoted to such other subjects as:

The Germanic Migrations and the Break-up of the Empire.

The Establishment of the Kingdom of the Franks.

Germanic Ideas of Law and Customs.

The Feudal System.

Extension of the Church; and Conflict between the Papacy and Empire.
Rise and Conquest of Mohammedism.
The Crusades.
The Growth of the French Monarchy.
The Napoleonic Wars.
The Decay and Fall of the Holy Roman Empire.
The Congress of Vienna.

Emerton's *Introduction to the Middle Ages.*
Robinson's *History of Western Europe.*
Fisher's *History of the Reformation.*
Gardiner's *French Revolution.*

First and second semesters. Four hours. Omitted in 1910-11.

14 History of Recent Times.

This course will begin with the rearrangement of Europe by the Congress of Vienna, and will trace the influence of the Revolutionary movement and spirit on the several countries of Europe, the unification of Italy and Germany, and the development of Russia. It will involve a consideration of many interesting and perplexing questions in European life and politics, and will lead to a discovery of the conditions in the home countries whence come many immigrants to America. The course will close with a series of lectures and studies on "Europe and the World of To-day."

European History from 1815 to the present day.
Seignobos' *Political History of Europe since 1814.*
Fyffe's *History of Modern Europe*, and Sources.
First and second semesters. Four hours.

15 History of Ancient Civilization.

This course will aim to do just three things: first, to furnish a thorough preparation for teaching Ancient History in High Schools; second, to help students looking forward to professional or public life to an understanding of the history of ancient peoples and the character of their civilization; and, finally, to aid the student of history and politics to interpret

the character and contribution of the ancient nations to the general civilization of the race. The method will include: first, a survey of the history of the ancient nations; second, a study of the content and character of the ancient civilizations and of their contribution to history. In this last an effort will be made to discover and realize the significance of the Hebrew, the Grecian, and the Roman elements in European and modern civilizations.

First and second semesters. Four hours.

Law and Politics.

The courses in this department have to do with states and their relations to each other; with governments, their forms and workings and institutions; and with related subjects. The work aims to cultivate breadth of view and sound thinking on governmental and political questions, to promote good citizenship, to furnish a preparation for the study of law and for the teaching of civil government, and to provide a training which shall be helpful and useful to those who may enter a business career or professional life. The courses in history are arranged as a preparation for the work in this department.

16 International Law.

This course will afford a careful study of the laws of war, peace, and neutrality, together with a consideration of the proposed plans of arbitration. Particular attention will be given to cases in which the United States has been directly interested, and the students will frequently be referred to such cases as are found in Scott's *Cases on International Law.* Attention will also be directed to the related subject of diplomacy and to the place and power of America in the affairs of states.

Woolsey: *International Law.*

Lawrence: *Principles of International Law.*

One semester. Four hours.

17 Administrative and Business Law.

This course will consist largely of lectures, with taking of notes and reading of assigned works and references. The

course does not aim to fit the student to take an examination at the bar or to be his own lawyer; but rather to furnish a fair acquaintance with those legal principles and ideas which are involved in ordinary business affairs, and thereby to furnish him with such useful information as will enable him to know when he ought to consult a lawyer in order to avoid business pitfalls. Some of the subjects considered will be the following: Contracts; Agency; Acquisition of Property and Transfer of Same; Wills; Deeds; Bankruptcy and Insolvency; Insurance; Negotiable Paper; Partnership; Stock-Companies; Corporations; Common Carriers; Domestic Relations and Wrongs.

One semester. Four hours.

18 Comparative and Practical Politics.

The class work will be based largely on Wilson's *The State*, and Bryce's *American Commonwealth*. Lectures and references will supplement these texts. The course will furnish the student a comparative study of governments and their workings with special attention to the United States, England, France, Germany, and Switzerland. Some time will be given to the history of political theories and the general principles of politics. During the second semester, consideration will be especially directed to forms of local government and to municipal institutions; to political parties and their organization and power in American life; and, finally, to modern problems of politics and municipal administration.

One semester. Four hours.

Political Economy.

19 General Course.

This will consist of recitations with frequent written and oral tests, and of occasional lectures with assigned readings from standard authorities. The aim will be to give a thorough drill on the fundamental principles of the science. In addition, the student will be expected to prepare one or more papers on such subjects as: Land and Rent, Protection and Reciprocity, Labor and Wages, Enterprise and Profits, or other subjects of equal importance.

During the last half of the year special attention will be devoted to such subjects as: Modern Industrialism, The Modern Distributive Processes, and problems arising therefrom.

First and second semesters. Four hours.

20 Descriptive Political Economy.

a—Money, Bimetallism, and Banking.

b—Taxation, Transportation, and Socialism.

This course will consist of one semester of study on each of the series of subjects under "a" and "b" above.

In the series "a" the class will use:—

Scott: *Money and Banking.*

Dunbar: *The Theory and History of Banking.*

Laughlin: *History of Bimetallism in the United States.*

In the series "b" the class will use:—

Seligman: *Essays in Taxation.*

Johnson: *American Railway Transportation.*

Ely: *Socialism and Social Reform.*

The object of presenting these several subjects is to give the student a larger opportunity to study these very important and practical subjects than can be furnished in the single year allotted to the general course, and, at the same time, not to devote so much time or attention to any one subject that the student will be compelled to omit others entirely.

First and second semesters. Four hours. Omitted in 1910-11.

One year of work in Politics or in Practical Sociology may be classed with the work in Economics by students seeking to do major work in this department.

Suggested Groups with Major in History.

1		2		3		4	
History	32	History	24	History	24	History	24
Philosophy	12	Sociology	16	English	16	Political Ec.	16
Mathematics	6	English	12	Mathematics	6	Sociology	8
Biology	10	Mathematics	6	Philosophy	15	English	6
Chemistry	10	Philosophy	12	Biology	10	Mathematics	6
German	16	Science	10	Chemistry	10	Philosophy	6
Latin or French	8	German	16	German	16	Science	10
English	6	Latin or French	8	Latin or French	8	German	16
Bible	8	Bible	8	Bible	8	Latin or French	8
Electives	16	Electives	12	Electives	11	Bible	8
						Electives	16
	124		124		124		124

Groups 1 and 2 are especially adapted to the needs of those who contemplate the study of law.

Group 3 is designed to meet the needs of those who may desire to prepare to teach History and English in the High Schools.

LATIN.

PROFESSOR W. L. RANKIN.

The aim of the courses in this department is to give the student a clear conception of the genius of the Latin language, an accurate knowledge of its form and structure, and the ability to read its masterpieces with intelligent appreciation. The work involves and cultivates also familiarity with the essential facts and lessons of Roman history, the characteristics of Latin literature, and the conditions prevailing in Roman public and private life. Illustrated lectures are given on Rome and the Roman people. The courses for the Freshman year are made especially strong by allowing, outside of the four hours spent in the interpretation of Latin authors, one hour a week for auxiliary work along grammatical and historical lines. These one-hour courses are also open to students from other classes.

11 Livy.

Selections from Books 1, 21, 22. Special points of emphasis: grammatical construction, the Roman monarchy, the rise and growth of Roman institutions, the period of the Punic wars.

First semester. Four hours.

12 Prose Composition.

Review of grammar, syllabus of Latin constructions, oral and written exercises in Latin composition. To accompany course 11.

First semester. One hour.

13 Cicero and Ovid.

De Senectute and *De Amicitia.* Careful tracing of all historical allusions. Outline of Roman Philosophy. Selections from *Metamorphoses* of Ovid for rapid reading.

Second semester. Four hours.

14 Roman History and Roman Life.

Studied in general outline by lectures and texts. To accompany course 13.

Second semester. One hour.

15 Horace.

Four Books of the *Odes. Carmen Saeculare.* Selections from the *Satires.*

First semester. Three hours.

16 Horace and Tacitus.

Selections from the *Epistles* of Horace and the *Annals* of Tacitus.

Second semester. Three hours.

17 Roman Correspondence.

Selected letters of Cicero and of Pliny the Younger.

First semester. Two hours.

18 Roman Comedy.

Selected plays of Plautus and Terence.

Second semester. Two hours.

19 Roman Christian Literature.

Octavius of Minucius Felix.

First semester. Two hours.

20 Lucretius.

De Natura Rerum. Parts of Books 1 and 2.
Second semester. Two hours.

21 Latin Prose.

Advanced Composition.
First semester. One hour.

22 Latin Literature.

Lectures and text-book study.
Second semester. One hour.

23 Teachers' Course.

A special course will be given in preparation for the teaching of Latin, to be taken in connection with Education 17.

Suggested Groups with Major in Latin.

Latin	20	Latin	20	Latin	20
German	16	Greek	20	History	16
French	8	French	8	French	8
English	12	English	6	English	6
Philosophy	15	Philosophy	15	German	16
History	8	History	8	Philosophy	15
Mathematics	6	Mathematics	6	Mathematics	6
Science	10	Science	10	Science	10
Bible	8	Bible	8	Bible	8
Electives	21	Electives	21	Electives	19
	124		124		124

LIBRARY SCIENCE.

PROFESSOR FLATTERY.

11 Reference Work and Bibliography.

The aim of this course is to acquaint the students with the library, to familiarize them with books of reference, to enable them to look up subjects expeditiously, and to encourage them in independent research; to aid in the valuation of authorities, and in proper selection of material upon specific subjects. The course includes the study of reference books, indexes, periodicals, and bibliography.

Reference books are classified in groups, as dictionaries, handbooks of general information, biographical aids, quotations,

statistics, etc. The books of each group are discussed and discriminated and their contents analyzed. Notes are taken by the students, and practical problems are assigned to test the value and accuracy of the notes. Through this method of work, students learn from practical experience what sources to consult for specific kinds of information. Periodicals are also classified and discussed with reference to the particular field covered by each. The study of bibliography involves practice in preparing reports on current events, and classified lists of references to books and magazine articles on special topics.

MATHEMATICS.

PROFESSOR RAY; PROFESSOR DANCEY.

The following courses in mathematics will provide material for such training and culture as may be deemed essential to every symmetrically developed mind, and will prepare the student for the various branches of science in which mathematical analysis is employed.

Students who intend to specialize in any department of applied mathematics should not omit any branch of pure mathematics which may be necessary to equip them properly for their chosen field.

11 Algebra.

Required of freshmen. The course begins with a review of various subjects of elementary algebra with stronger requirements in matters of development than is possible in a beginning course. The more advanced work may include the progressions, ratio, proportion and variation, binomial theorem, logarithms, series, probability, graphical representation, and solution of equations. Students presenting one and a half units at entrance may have additional subjects.

First semester. Three hours.

12 Trigonometry.

Required of freshmen. Students must have completed plane and solid, including spherical, geometry. The coordinates of a point and their relation to the change of angle

at the point of origin are first presented; then the functions of an angle and thorough drill upon the equations involving the functions, and the application of these equations to the solution of the right triangle, with and without the use of logarithms. The development of formulas used in the solution of all triangles receives especial attention. An introduction to spherical trigonometry, and the solutions of spherical triangles form part of the course.

Second semester. Three hours.

13 Algebra, Trigonometry and Graphical Methods.

This course includes material, selected and co-ordinated, from algebra, trigonometry and analytic geometry, with drill in use of instruments and methods of computing. Required of freshmen in engineering.

First semester. Five hours.

14 Analytic Geometry and Trigonometry.

Open to students who have had courses 11 and 12 or 13. Further work in trigonometry is given, followed by plane and solid analytic geometry. Required of freshmen in engineering.

Second semester. Five hours.

15 Elementary, Differential and Integral Calculus.

Open to students who have had course 14.

All students who wish to go beyond the elements of the physical sciences should take this course, as the modern treatment of these subjects is based largely upon the calculus.

First and second semesters. Three hours.

16 Differential Equations.

Open to students who have had course 15. Recommended to those who wish to specialize in mathematics or physics.

First semester. Three hours.

17 Projective Geometry.

Second semester. Three hours.

18 Descriptive Geometry.

Problems relating to points, lines, planes, and surfaces of revolution, with practical applications. The course requires four hours of drawing, one home exercise, and one recitation per week. Text: Phillips and Millar's *Descriptive Geometry.*

Prerequisite: Mechanical Drawing.

First semester. Three unit hours.

19 Mechanical Drawing.

This course presents the elements of machine drafting. Instruction is given in the use of instruments, lettering, sketching machine parts, working drawings, tracing, and blue printing. The course is based on Phillips' plates, Adams' *Mechanical Drawing,* and Phillips' *Lettering Manual.* Students are required to provide themselves with high-grade instruments.

Six hours of drawing per week. First and second semesters. Six unit hours.

20 Surveying.

Lectures, recitations, field and office work in the theory, care, use, and adjustments of Wye and dumpy levels, hand level, compass, transit, and planimeter, platting of areas and profiles, and the making of topographic maps.

The field work includes the use of chain and tape, determination of areas with tape and transit, differential and profile leveling, running of lines and traverses, triangulation, observations on the sun and Polaris, and the use of the stadia. A careful study is made of United States land survey methods, original surveys, re-establishment of corners and boundaries, and court decisions relating thereto. Problems are assigned in farm surveying, relocation of boundaries, partition of land, etc.

Johnson's *Surveying,* Smith's *Surveying Manual,* and adjustment blue prints.

Six hours field work and two hours class work per week. First and second semesters. Six unit hours.

21 Advanced Surveying.

Topographic and hydrographic surveying, and the elements of railway curves. The field work includes the use of the plane

table and stadia in making topographic surveys, a survey of the bed of Lake Pewaukee, measurement of the discharge of the Fox River, and method of locating curves. The office work includes calculations, platting and making of maps.

Johnson's *Surveying* and Allen's *Railway Curves.*

One lecture and six hours of field and office work per week.

Second semester.

22 Mechanics.

A course in applied mechanics based on Maurer's *Technical Mechanics.* Physical principles are here applied especially to engineering problems. The subject requires a thorough working knowledge of calculus and elementary mechanics.

First and second semesters. Four hours.

23 Teachers' Course.

For those who are preparing to teach any branch of mathematics a special course is offered with a credit of one unit hour, this course to be taken in connection with Education 17.

Suggested Groups with Major in Mathematics.

1		2		3	
Mathematics	20	Mathematics	20	Mathematics	20
Physics	14	History	16	Physics	14
Chemistry	15	German	16	Philosophy	15
Mineralogy	5	French	8	Chemistry	15
Geology	6	Physiology	6	Physiology	6
German	16	Biology	10	German	16
French	8	Chemistry	10	French	8
English	6	English	6	English	6
History	8	Philosophy	6	Bible	8
Philosophy	6	Bible	8	History	8
Bible	8	Electives	18	Electives	8
Electives	12				
	124		124		124

Group 1 may be taken as a pre-engineering group.

Groups 2 and 3 would be suitable for those who are preparing to teach.

MINERALOGY.

PROFESSOR HOPKINS.

The work in mineralogy is especially adapted to the needs of students of chemistry and engineering.

11 Descriptive and Determinative Mineralogy.

Crystallography, including a study of crystal forms; the measurement, calculation, and projection of crystals; the physical and chemical properties, origin, formation, decomposition, distribution, uses, and determination of the more common minerals. Laboratory practice in identifying minerals by their physical properties and by blow pipe methods. Emphasis is given to the important relation existing between crystallography and the sciences of chemistry and physics.

Prerequisites: Chemistry 11 and 12 and Trigonometry.

First semester. Five unit hours. To be given in 1910-11 and alternate years.

MODERN LANGUAGES.

PROFESSOR GUILD; MISS FLATTERY; DR. ROGERS.

In planning the courses for this department an effort has been made to combine classical training with a practical knowledge of German and French as living languages. The masterpieces of the two languages are critically studied in such a way as to lead the student to a clear appreciation of the literary development of the two nations, and to help him to interpret clearly the thought of their great writers, and to understand the inner life of these peoples as revealed in their literature. While giving preëminence to modern languages as aids to the broad, liberal culture of college training, an effort is made to give such a command of the languages as will be of value in practical, everyday life. It is frequently urged against the modern language courses of American colleges that, while students may be able to read the works of the great authors, their knowledge is of no service in travel, in business life, or in independent literary work. It is the object of this department to meet this criticism by giving something practical; by

training not only the eye, but the ear, and above all, the tongue.

German and French are, as far as seems advisable, the language of the class room, and special attention is given to the true German idioms. Each spring a play is presented by the German Department. Special courses are given for those who wish to make use of German and French in scientific research.

German.

11 Freshman German.

Schiller: *Wilhelm Tell;* Goethe: *Hermann und Dorothea;* Freytag: *Die Journalisten.* Memorizing of poems and study of short plays. A thorough review of grammar carried on entirely in the German language. Composition and reproductive translations throughout the year. Harris: *German Exercises.*

One day of the week is devoted entirely to German conversation and, through outlines and complete lists of questions, students are taught terms and forms used in home, business, and travel.

First and second semesters. Four hours.

12 College Beginning German.

For the benefit of students who enter college with no knowledge of German, a special class is formed which covers two years' work in one year and prepares for German 11. Only those who have maintained a high grade of scholarship in other subjects, and who are capable of the closest application will be admitted to this class.

First and second semesters. Five hours.

13 Sophomore German.

Keller's *Bilder aus der deutschen Literatur* with further study of authors. *Das Lied von der Glocke,* and other ballads and poems of famous authors. Goethe's *Faust, Part One;* Lessing's *Nathan der Weise;* or Schiller's *Maria Stuart.* Supplementary reading: Freytag's *Soll und Haben;* Heine's *Harzreise;* Scheffel's *Ekkehard.*

During the year the same practical work is continued as in course 11. Jagemann's *German Prose Composition* is used

for translation into German. Reproductive work and independent themes are required in this course.

First and second semesters. Four hours.

14 Rapid Reading and Conversation.

For students wishing to obtain fluency in conversation and reading, a short course is offered, to follow German 13. The assigned texts are: Eichendorf, *Aus dem Leben eines Taugenichts.* Schiller, *Jungfrau von Orleans.* Lagerlöf, *Eine Gutsgeschichte.* Niese, *Licht und Schatten.*

15 Lessing.

Nathan der Weise. Emilia Galotti, and selections from *Laocoon.* A study of Lessing as a critic and of his influence upon the development of a national drama. An elective course for those who have had courses 11 and 13.

First semester. Three hours. Given in alternate years with course 17.

16 Goethe.

A critical study of the different periods of Goethe's literary activity.

Second semester. Three hours. Given in alternate years with course 17.

17 Contemporary German Literature.

A study of novels, lyrics, and dramas of the modern period portraying the social and political tendencies of the times.

First and second semesters. Three hours. Given in alternate years with courses 15 and 16.

18 Scientific German.

For students specializing in science a course of reading in current scientific German is provided. It consists of the reading of German texts and of conversations, discussions, and written work in German, the aim being to familiarize the student with technical German.

First and second semesters. Three hours.

Suggested Groups with Major in German.

German	24	German	24	German	24
French	16	Latin	16	English	18
English	12	English	6	French	8
History	8	French	8	Philosophy	15
Mathematics	6	Philosophy	15	History	8
Science	10	History	8	Mathematics	6
Philosophy	6	Mathematics	6	Science	10
Bible	8	Science	10	Bible	8
Electives	34	Bible	8	Electives	27
		Electives	23		
	124		124		124

French.

11 Elementary French.

a—Grammar; mastery of verbal inflections, construction of sentences, and idiomatic usages of the French language by constant oral drill and written exercises, with reading of selected stories.

First semester. Five hours.

b—Reading of selected intermediate French texts, with conversations, grammatical analysis in French and consecutive French composition.

Second semester. Five hours.

12 Literary French.

Reading and study of masterpieces of French classic literature, ancient and modern, including both prose and poetry. The texts read will be varied from year to year to give opportunity for additional work in the subject. All class work, oral and written, is in French.

First and second semesters. Three hours.

13 Scientific French.

This course includes an amount of reading equal to that of course 12, and the method of study is the same. The matter read and studied is intended to represent all departments of scientific study as set forth in the writings of leading French scientists.

First and second semesters. Three hours.

PHILOSOPHY.

PROFESSOR ROGERS.

The work in this department is designed to familiarize the student with the more fundamental lines of philosophic thought; to enable him to think consistently and independently on the ultimate problems of reality, the physical world and the human self, and to entertain clear ideas of the relations of these problems to his own life and conduct. To this end the courses in history of philosophy, logic, and psychology have been planned to meet the needs of those students who may elect the work for general culture and discipline, and also for those students who may wish to pursue the work with a special interest in philosophy or education. Courses 11, and either 12 or 13, are required of all students; the others are elective. A minimum of 26 unit hours, including thesis, is required of those students who elect a major in philosophy and education.

11 Psychology.

A study of the general field of psychology from the biological point of view. Recitations, lectures, experiments and demonstrations.

First semester. Three hours.

Given in the Department of Education.

12 Logic.

A study of the principles of correct reasoning, the methods of science, and an outline of the philosophical theory of thought. Recitations, lectures, and practical exercises.

Second semester. Three hours.

13 History of Ancient and Mediaeval Philosophy.

Special stress is placed upon pre-Socratic, Socratic, Platonic, and Aristotelian systems of philosophy, with full outlines and discussions of the scientico-philosophical systems.

First semester. Three hours.

14 History of Modern Philosophy.

A study of the development of philosophy from the Renaissance under Greek inspiration to the present century. The influences of religious and scientific thought and of political and economic conditions upon philosophy are closely traced.

Second semester. Three hours.

15 Ethics and Religion.

A study of the facts and problems of social life, together with a review of the principal ethical theories. The history and philosophy of religion. Recitations, lectures and collateral reading.

First semester. Three hours.

21 Biblical Psychology.

A study of the Bible doctrine of man, the development of Christian thought and the grounds of theistic philosophy.

Second semester. Two hours.

Suggested Groups with Major in Philosophy.

Philosophy and Education	30	Philosophy	26	Philosophy	26	Philosophy	26
English	6	English	12	Biology	16	History	16
Mathematics	6	Mathematics	6	English	6	English	6
History	8	History	8	Mathematics	6	German	16
Science	10	Science	10	History	8	French or Latin	8
German	16	Latin or French	8	German	16	Bible	8
Latin or French	8	German	16	Chemistry	10	Science	10
Bible	8	Bible	8	Latin or French	8	Mathematics	6
Electives	28	Electives	30	Bible	8	Electives	28
	124		124	Electives	20		124
					124		

PHYSICS.

PROFESSOR DANCEY.

It is the aim of the Department of Physics to present courses which will furnish preparation for technical work, for teaching, or for advanced scientific study. Physics relates itself in such a way to other sciences and to mathematics as to make it a very desirable course for the student who expects to

pursue the study of either science, mathematics, or engineering. Courses 11 and 12 are required in all engineering schools, and courses 13 and 14 are usually either required or elective. From the cultural standpoint physics should be of interest to any one who wishes to acquaint himself with the laws of nature. Recent advances in the sciences make the understanding of underlying principles especially desirable.

11 General Physics.

This is a course in the fundamental facts and principles of physical science. The work of the class room is closely correlated with that of the laboratory where the student is trained in accurate verifications and proof of physical laws as well as in the care and manipulation of apparatus.

During the first half year mechanics, heat, and sound are studied. Electricity, magnetism, and light form the subject matter during the second semester. Crew's *General Physics*. Recommended for sophomores.

Two lectures, two quizzes, and two laboratory periods each week. Ten unit hours.

12 Mechanics.

A theoretical and experimental study of the general principles of motion and equilibrium, forces, torques, rotational inertia, etc. The treatment is more analytical than in course 11. Prerequisites: Physics 11 and Calculus.

Second semester. Three unit hours.

13 Electrical Measurements.

In this course the more general laws of electricity and magnetism are discussed, the practical equations employed in the laboratory are derived, and their application in electrical engineering developed. The laboratory work includes the measurement, by one or more methods, of electric currents, resistance, electro-motive force, temperature-coefficients, capacity; a study of the magnetic properties of iron and steel; thermo-

electric effects; the use of Carey Foster bridge, potentiometer, copper voltameter, etc.

Two recitations and two laboratory exercises each week. First semester. Four unit hours.

14 Electrical Measurements.

This is a laboratory course open to students who have completed course 13. Standard experiments not undertaken in the more elementary courses are taken up here. The student is asked to work out for himself some special problem and to inform himself fully upon the literature of the subject. Each student arranges his own time for the course and receives credit corresponding to the time employed.

First and second semesters. Two to five unit hours.

15 Heat.

An advanced course of lectures and laboratory work covering the general theory of heat and thermo-dynamics. Prerequisites: Physics 11 and Calculus.

First semester. Four unit hours.

16 Light and Sound.

An advanced course of lectures and laboratory work covering the general theory of light and sound.

Second semester. Four unit hours.

PUBLIC SPEAKING AND DRAMATIC LITERATURE.

PROFESSOR M. N. RANKIN.

Public Speaking.

The purpose of this department is to develop power of expression, either as general culture, or as preparation for public speaking. Course 12 in argumentation and debate aims to develop clear thinking, logical reasoning, close observation, quick mastery of expression, persuasiveness, fair methods, and courtesy. In course 13 the study of great orations and the attempt to render them involves: analysis, interpretation, dramatic sympathy, appreciation of literary style, ability to work with an audience. After studying examples of the various forms of address, application of the principles suggested is re-

quired in the preparation of original productions. Course 11 is especially adapted to the preparation for public recital work. The method of instruction is that of the Emerson College of Oratory. The system is founded upon the laws of evolution in art, and develops the sources of power through natural expression. It involves culture of the broadest kind, requiring intellectual concentration, esthetic appreciation, and power to control an audience.

Students may be secured as readers by application to the head of the department.

11 Literary Interpretation.

Impersonation, dramatic reading, expressive voice culture, responsiveness in gesture, preparation for public recitals.

First and second semesters. Four hours.

12 Argumentation and Debate.

Study of analysis, evidence, refutation, brief-drawing and presentation; practical application of these principles in debate.

Text-book: Baker and Huntington.

First and second semesters. Two hours.

13 Public Speaking.

Study of representative orators, their lives and methods; analysis of their speeches. Study of different forms of address: the eulogy, the legislative address, the after dinner speech, etc. Original work. Extempore speaking.

Text-books: Hardwick's *History of Oratory.* Baker's *Forms of Public Address.*

First and second semesters. Two hours.

14 Pulpit Oratory, Bible and Hymn Reading.

First semester. Two hours.

15 Parliamentary Law.

First semester. One hour.

16 Voice Culture. Physical Culture.

First and second semesters. Two hours.

Dramatic Literature.

These courses include the history of the drama, the laws of dramatic art, the analysis of plays, the study of literary style. They emphasize especially the interpretation of character, in recognition of the fact that the dramatic ability to see from another's standpoint is of fundamental importance to helpful service along all lines.

11 Dramatic Interpretation of the Book of Job.

Second semester. Two hours.

12 Shakespeare.

Thorough study of two tragedies, two comedies, and two historical plays, including: extensive character analysis founded on the text, character sketches, study of ethical problems, dramatic analysis, criticisms by prominent writers, and dramatic interpretation.

Open to Sophomores and Juniors.

First and second semesters. Two hours.

13 Shakespeare: Reading Course.

The complete works of Shakespeare, his life and art. History of the drama.

Open to Seniors.

First and second semesters. Three hours.

14 Modern Dramas.

Browning, Ibsen, Yeats, Phillips, Rostand, Hauptman, Maeterlinck.

First and second semesters. Three hours.

SOCIOLOGY.

In this department lectures are given on the general subject of sociology, together with a survey of the field of social relations, with the view of establishing principles and laws. The course of study offered aims to fit the student to make a personal study of social questions, to interpret modern social problems, and as far as possible to grapple with and under-

stand the perplexing questions of our modern life; thus preparing him for an intelligent and responsible citizenship. By a careful study of the nature and laws of human society it is designed to prepare the student for a continuous study of society and public policy throughout life. The student is made acquainted with a number of the works of our best writers on the subject of sociology and social problems. In addition to this more theoretic and scientific study, the practical side of the subject is emphasized. Each student is enabled, through the lectures and by means of wide reading and discussions in the class room, to secure a general appreciation and understanding of modern social and civic conditions. The dependent class will be studied with special reference to slum conditions; the defective class, together with the treatment of the same; and the delinquent class, with the causes and prevention of crime. Personal acquaintance is secured with some important phases of present social and civic life by visits to charitable and penal institutions and agencies of social betterment in and about Milwaukee.

11 General Sociology.

Gidding's *Elements of Sociology.* The nature and laws of human society, familiarizing the pupil with the principal forms of social organization; with the thoughts, the sympathies, the purposes, and the virtues that make society possible; with the benefits that society confers; and with the conduct that worthy membership of society requires.

First semester. Three hours.

12 Practical Sociology.

Henderson's *Social Elements.* The object of this course is to direct attention to the phenomena of human associations; to teach the methods of classifying facts of this order; to give training in the search for efficient causes; to show how to interpret social duties which arise out of conditions and relations; and especially to show the connection of order and progress with the institutions and methods of education.

Second semester. Three hours.

Department of Music.

The object of the department of music is to offer extensive courses in the practical and the theoretical study of all branches of the art and science of music, and to furnish instruction in such other subjects as may be considered necessary for the fullest development of the student's faculties, preparatory to the pursuit of music as a profession. It provides also for the study of music as an adjunct to general culture or as an accomplishment.

Instruction is offered in piano, voice, organ, violin, mandolin, guitar, and in history of music, harmony, counter-point, composition, musical form and analysis, and methods in public school music. Special arrangements are made for students not wishing to take up the literary work required for the degree of Bachelor of Music, or desiring to devote themselves more especially to the study of music with little or no collateral work but with a view to graduation either in the teachers' course or graduation class. However, it is expected that boarding students will take some literary studies. Students taking advanced work in music may be allowed eight units towards their A. B. degree.

Advantages.

The advantages of instruction in a conservatory over private instruction are so manifold and varied and so obvious to the serious minded that merely to mention the most important will be sufficient. The musical profession, unfortunately, includes many incompetent teachers, it being a profession open to all whether properly qualified or not. The faculty of the music department of a college is chosen with special reference to the fitness and ability of its members as teachers and artists; it would not be in the interest of such an institution to sacrifice its reputation by employing other than capable and expert teachers. Theory and practice should be united in the successful study of music. It is possible to secure good instruction from private teachers provided the best are selected; still it is

only a conservatory with carefully chosen specialists in every department that can offer to the student the facilities necessary for securing a complete equipment as a musician and give him the necessary preparation for successful artistic work as teacher or virtuoso. Again, the atmosphere of a conservatory is in itself stimulating. The broadening and inspiring influence of a good college is inimical to the limited culture and narrow horizons to be avoided by music students of ambition and high ideals. A conservatory cannot fail to create ambition and self reliance among its students. By observation of the attainments of those who have acquired a higher degree of proficiency, the student is inspired to greater effort, his forces are directed along right lines, and his perceptive and critical faculties are sharpened. Confidence and self-control are acquired by frequent performances before others, and the student is surrounded by influences helpful to the cultivation of a refined musical taste.

Recitals.

Frequent recitals are given by members of the faculty and the students, the latter being thus enabled not only to cultivate their musical taste by hearing the best music interpreted by competent artists, but also to develop to the fullest extent their own ability for public performance. The close proximity of Carrol College to Milwaukee gives to the students the advantages of living in a musical center.

PIANO.

PROFESSOR SHEPARD; MISS WILLSON.

Careful attention is given to the playing of every conservatory pupil at whatever age he or she may enter the institution. The most approved and modern methods are sought out and utilized in developing the student's capabilities, talents, and individuality. The utmost care is given to the acquisition of a good touch, a sensitive ear, rhythmical accuracy and stability, and a proper understanding of musical phrasing and expression. The scientific principles underlying the technical methods of the modern pianist are fully explained and applied. While

the standard classical composers are drawn upon for the greater part of the piano curriculum, the more modern romantic school is by no means neglected. The conservatory recognizes the fact that pianists of the present day should be versatile and many-sided in their artistic attainments, and to this end the piano course is planned from its most elementary stage. The method of instruction is based principally upon private lessons. The best results are obtained only by individual attention to the needs and by careful study of the artistic, mental, and physical capacity of each pupil.

During the last year, students in the teachers' course will pursue the studies having a direct bearing on the best methods of imparting musical knowledge, and will survey in a general and systematic way the materials for musical education from the beginning to the attainment of a certain degree of proficiency. In order to make the instruction given in this department thoroughly practical, pupils of various grades are utilized, thus affording the normal students the great advantage of doing actual teaching under the supervision of an experienced master.

Preparatory School.

Hand culture and gymnastic exercises to secure muscular control of arm, wrist and fingers. Foundation technical exercises based on the Leschetizky system for the cultivating of the touch and for the formations of the hand and preparation for the proper execution of scales, arpeggios, and octaves.

Etudes: Loeschhorn, Gurlitt, Herz, Kullak, Pischna, Krause.

Etudes, Op. 45 and 46: Heller.

Studies on Touch: Wieck.

Sonatinas: Clementi, Dussek and Kuhlau.

Sonatas: Haydn and Mozart.

Classic and modern compositions.

Teachers' Certificate Class.

Advanced technical studies, scales, arpeggios, broken chords, octaves.

Technical Studies: Pischna.

Studies in Velocity and *The Art of Finger Dexterity*: Czerny.

Two and Three-Voiced Inventions: Bach.

Octave Studies: Kullak.

Etudes: Cramer.

Sonatas and Pieces: Haydn, Mozart, Beethoven, Handel. Weber, Schubert, Schumann, Mendelssohn, Chopin, and compositions by modern composers.

Sight playing and ensemble class work.

Graduating Class.

Technical Studies: Phillip.

Gradus ad Parnassum: Clementi.

English Suites and Well-Tempered Clavichord: Bach.

Etudes: Chopin, Liszt, Rubenstein, Henselt, Moszkowski, etc.

Pieces and Concertos: Beethoven, Chopin, Schumann, Brahms, Saint-Saens, Liszt, etc.

Accompanying; sight playing; ensemble class work.

Post Graduate or Artists' Class.

The artist school is especially designed for students who having gained a theoretical knowledge, thorough and fundamental, and technical ability, are able to study the greatest works by classic and modern composers and who desire to reach a higher standard of excellence as artists. The intellectual and other artistic requirements are considerably greater than those for graduation. One object in this course is to provide the student artist with a varied repertoire suited to his musical individuality and to his needs as a public performer.

ORGAN.

PROFESSOR SHEPARD.

Preparatory School.

Students must complete the preparatory school of the piano course before admission is granted to the organ school.

Lemmen's *Organ School;* Nilson's *Pedal studies;* Guilmant's *Practical Organist;* and smaller compositions for the church.

The acquiring of an organ touch, both legato and staccato playing, and a systematic course of pedal playing. Choir accompanying and such work in improvisation and modulation as is essential to the ordinary church organist.

Intermediate Class.

Preludes, Fugues, and *Choral Vorspiele* of Bach. Easier *Sonatas* of German and French schools. Church and concert music of all countries. Improvisation in the various forms and the playing of elaborate services, including the arrangement of piano accompaniments for the organ and the reading at sight of vocal scores. A comparative study of the organ and organ music of all countries, with illustrations. Theoretical harmony and analysis and ear training. Lectures on the history and construction of the organ in addition to the regular lectures on music and history.

Graduating Class.

The greatest sonatas and symphonies of all schools; the greater works of Bach and Liszt and a study of the early compositions for organ and concertos with orchestral occompaniment. Theoretical counterpoint and canon; analysis of sonatas and fugues.

VOICE.

PROFESSOR CLAYTON.

In no branch of the musical art is a systematic and progressive course more necessary than in voice. Careful attention is given to bringing the voice out tone by tone until all registers are blended and the voice properly placed. The right kind of breathing exercises, together with the most advanced technic are given the pupil for daily practice, and the vocalises of the best masters in voice are used as the student can master them. Mr. Clayton has studied with a number of the most eminent teachers in the world and brings to his work the best ideas of the various schools. He has had years of successful experience as a teacher and many of his pupils are to-day filling responsible positions.

In addition to standard songs and selections from oratorio and opera, the following is the course required for graduation:

First Year.

Sight reading; Tone Placement.
Breathing exercises; Technic.
Neidlinger: 25 Vocalises; Concone: 50 Lessons.

Second Year.

Advanced Technic; Sustained Singing; Scales; Dotted Notes; Repeated Notes; Syncopated Notes; Triplets; Arpeggios; Grace Notes; Mordents, Turns; The Trill; Chromatic Scales; Detached Notes; The Roulade.

Third Year.

Sustained Singing; Technical Studies; Rhythm; Phrasing; Combined Studies.

Fourth Year.

Advanced Technical Studies; Phrasing; Expressive Singing; Dramatic Singing; Bravura Singing.

A teacher's certificate will be given those who finish satisfactorily the third year's work.

Public School Music.

In order to supply the demand for competent teachers in the important branch of music a thorough course is given in the Natural Music Series. The complete course comprises the following subjects:

Sight Reading; Musical History; Harmony; Treatment of Monotones; Theory; Ear Training; Practice Teaching; Rote Songs; Child Voice; Chorus Directing.

The time required to complete the course varies from one to two years, according to the previous work done by the pupil.

HISTORY OF MUSIC.

The department lays special stress upon this branch of musical education. The evolution of this wonderful art, from

its crudest to its most perfect forms is carefully traced, and all phases are treated in this interesting subject. The music course requires one year's work in musical history. The class lessons are held twice a week, and two credits per semester are given for this work. The work is taken for the most part from "Matthew's History of Music." During the second semester, when the lives of the composers are studied, and the growth of opera and orchestral music, a great number of other excellent works are used. The college library possesses a large number of suitable reference books for the pursuit of this study. It is recommended to others, besides those taking only a musical course, as a delightful study, and a most profitable one in that it provides an opportunity to know more about the growth and progress of this important art.

OTHER MUSIC.

Instruction is given on other instruments, such as violin, guitar, and mandolin.

General music work is open to all students, as well as classes for beginners and advanced students in chorus work.

There are a Young Men's Glee Club under the direction of Professor Clayton, and an Orchestra and Mandolin Club directed by Miss Willson.

Public recitals are occasionally given.

Schedule of Expenses.

For a semester
of 18 weeks.

Pianoforte, 18 one-hour lessons (Mr. Shepard)	$54.00
Pianoforte, 18 half-hour lessons (Mr. Shepard)	27.00
Pianoforte, 36 half-hour lessons (Mr. Shepard and Miss Willson alternating)	40.50
Pianoforte, 18 half-hour lessons (Miss Willson)	13.50
Vocal lessons, 18 half-hour lessons	27.00
Vocal lessons, 36 half hour lessons	40.50
Vocal lessons, 3 in class, 18 lessons	18.00
Piano practice, 1 hour per day	4.00
Musical Theory the same as private lessons. In classes the amount will be divided according to the number in the class.	
Lessons in mandolin and guitar, 18 lessons	$13.50

VOORHEES COTTAGE.

Physical Department.

MR. BLEAMASTER, PHYSICAL DIRECTOR.

The Object of the Work.

The work of this department affords every student the means of acquiring physical health and mental vigor. It is made eminently recreative and pleasant, thus freeing the student from the constant strain of study. All students are advised to pursue regular work in the gymnasium. Credit to the amount of four unit hours will be granted for such work toward the Bachelor's degree. The institution zealously encourages all pure and healthful recreation, and gives its support and direction to all indoor and outdoor games, subordinating them, however, to their place in the college curriculum.

The Gymnasium.

Carroll College possesses a modern and well equipped gymnasium. It measures 40x73 feet, is eighteen feet in height, and is finished in Georgia pine. The gymnasium, together with the locker rooms and shower bath, occupy the ground floor of Voorhees Hall. There are windows on three sides affording sufficient sunlight, and strict attention is paid to ventilation. The inside lighting is by caged electric lights. There are two handball courts in the gymnasium, and a commodious basket ball court. Above the gymnasium floor is a good running track, and a punching bag platform.

The Equipment.

The apparatus includes dumb bells, Indian clubs, bar bells, striking bag, wrist and finger machines, Swedish bars, pulley weights, horse, buck, horizontal and parallel bars, climbing ropes, traveling rings, spring board, vaulting poles, jumping standards, and all necessary apparatus for indoor athletics. In connection with the gymnasium are the bath rooms, provided with both tub and shower baths, and with a sufficient supply of

hot and cold water. Adjoining the men's bath room is the locker room, where a convenient, roomy, and well ventilated locker is provided for the use of each student. This room is the dressing room for the members of the athletic teams. Racks for bicycle storage are provided in the lower hall, with entrance from the west.

System of Exercises.

The system of exercises taught is thoroughly practical and is adapted to those who lead a sedentary life.

The work for the men is systematized as follows: In the fall term military marching, calisthenics, stall bar, mat work, and games; in the winter term the same work with the addition of the horse, horizontal and parallel bars; in the spring term athletic exercises are added, such as jumping, pole vaulting, and running.

Two hours of gymnasium work per week are provided for all women students. The exercise consists of marching, calisthenics, free hand gymnastics, and use of wands, Indian clubs and light apparatus. During the winter season special attention is given to basket ball. The recreative feature is made prominent in all of the gymnasium work.

Competitive Indoor Sports.

A schedule of basket ball games, relay races, etc., is prepared and carried on during the season of gymnasium work. These games come at the close of the calisthenic and apparatus work of the day. This series of games is carried on by classes both of the young men and of the young ladies.

Outdoor Sports.

The students of the college engage in foot ball, base ball and track athletics. Carroll is a member of the conference of Northern Illinois and Wisconsin Colleges and participates each year in a number of inter-collegiate contests with neighboring colleges. Carroll College stands for clean, wholesome athletics and adheres to the spirit as well as the letter of the regulations adopted by the conference colleges. While the college

lends every encouragement to inter-collegiate athletics it requires that this work be subordinated to the regular work of the school. All inter-collegiate contests are under the direction of the athletic association and the athletic committee of the faculty. The foot ball and base ball teams, with their managers and captains, are responsible to the athletic association and look to it for support. No student who is deficient in any of his work will be permitted to participate in any inter-collegiate contest.

The Academy.

Four years of academy instruction are given, in preparation for college, or for the needs of practical life.

The Academy is a member of the North Central Association of Colleges and Secondary Schools, and its diploma admits to any college or university.

Students from the public schools who wish to enter the Academy must show that they have successfully passed the eighth grade work, or that they hold a certificate of graduation from the upper form of the district school. Others who wish to enter on examination should present a certificate showing specifically the work done in the different branches of study, with examination standing.

Candidates for admission to the higher classes must exhibit a satisfactory certificate, or pass an examination on all the work of the previous years.

Irregular students may take an elective course, but will not be admitted to classes in which they cannot do good work. Special facilities are afforded to those who need to make up certain branches, provided they show suitable capacity and determination.

All candidates, unless known to the faculty, must present testimonials to good moral character, and certificates of regular dismission will be required from those who have been students of other schools.

Courses of Study.

One unit in any study signifies one daily recitation for the school year.

Summary of units offered: Latin 4, German 2, Mathematics 3, Science 4, History 3, English 4, Oratory 2. From these 22 units, 15 units are required for graduation. All students are required to take the work in Bible and gymnastics, or an equivalent of the latter.

The following units are required of all:

English 3, Mathematics 2½, History 1, Science 1.

One of the following groups must also be taken:

Group A—Latin 4; German 2; History 1; Elective 1.

Group B—Latin 4, or Latin 2 and German 2; Mathematics 1; History 1; Elective 2.

Croup C—Latin 2, or German 2; Mathematics 1; History 1; Science 1; Oratory 1; Elective 2.

That the above requirements may be met, there are offered for the first year's work, Latin, English, Algebra, Physiography; for the second year, Latin, English, Geometry, History; for the third year, Latin, German, Geometry, Algebra, History, English, Biology; for the fourth year, Latin, German, Physics, History, English, Oratory. Oratory is given credit only as a fourth year of English.

These requirements and electives are also exhibited in the following tabular form:

GROUP A.

FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Latin	Latin	Latin	Latin
English	English	German	German
Physiography	Geometry	Mathematics	Science, English, Oratory or History
Algebra	History	English	Bible
Bible	Bible	History	
		Bible	

GROUP B.

FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Latin	Latin	Latin or German	Latin or German
English	English	Biology	Physics
Physiography	Geometry	Mathematics	English
Algebra	History	English or History	Oratory or History
Bible	Bible	Bible	Bible

GROUP C.

FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Latin	Latin	Biology	Physics
English	English	Mathematics	English or Oratory
Physiography	Geometry	English or History	History
Algebra	History	Bible	Bible
Bible	Bible		Elective

GROUP D.

FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
English	English	German	German
Physiography	Geometry	Mathematics	Physics
Algebra	History	Biology	English, Oratory or History
Bible	Bible	English or History	Bible
Elective from other years	Elective from other years	Bible	Elective

Any study dropped without faculty consent obtained in advance shall count as a failure. All failures and conditions must be made up before a diploma will be granted.

BIOLOGY.

The biological work in the Academy aims primarily to present a comprehensive view of the plant and animal kingdoms in their relation to each other and to their environment. A somewhat detailed study is made of the higher groups, followed by a more rapid survey of the lower forms. While this work is useful as a preparation for Biology 11 in the college, yet it is not planned for that specific purpose, nor, indeed, is it required as a preliminary to the college work. It is intended rather to serve as a general introduction to the knowledge of living things, and to be a course fairly complete in itself.

1a. Zoology.

The work of this division is based on the text and laboratory guide by Linville and Kelly. These are supplemented by frequent class discussions, illustrated lectures, and occasional field trips. Laboratory drawings and notes are required.

Three recitations and four hours laboratory work each week. Third year; first semester. Five hours.

1b. Botany.

The work of this division is based on the text by Coulter, together with a manual. Recitations and laboratory work as in zoology, with frequent illustrated lectures and work in the field.

Third year; second semester. Five hours.

EDUCATION.

1 General Pedagogy.

This course is designed primarily for students who are without experience in teaching or for those who have not pursued the courses in general psychology or logic. The aim will be to

acquaint the student with the laws governing mental development and the arts and methods employed by the teacher in teaching the various subjects, and with the principles of school hygiene and school economy.

Second semester. Three hours.

ENGLISH.

The course of study in the Academy extends through four years, and includes the study of grammar, rhetoric, composition, and literature.

1 Grammar and Composition.

Review of English Grammar. Composition: simple narratives and descriptions. Literature: classics required for college entrance.

First and second semesters. Five hours.

2 Composition and Literature.

Narratives and descriptions based upon writer's experience and observation, or upon texts read in class. Literature: English classics.

First and second semesters. Five hours.

3 Rhetoric and Literature.

Study of principles of composition. Literature: English classics.

First and second semesters. Five hours.

4 Rhetoric and Literature.

Composition. Literature: History of English and American literatures. Classics.

First and second semesters. Five hours.

GERMAN.

1 German Grammar and Lessons.

Bacon, *German Grammar* and *Reader*. Volkmann, *Kleine Geschichten*. Storm's *Immensee*. Simple conversation based on practical subjects. Memorizing of German poems and idioms.

First and second semesters. Five hours.

2 German Readings.

Grammar reviewed. Hillern, *Höher als die Kirche*, Zschokke, *Der zerbrochene Krug*. Syntax, based on Allen's *German Stories, Part I*. Lessing's *Minna von Barnhelm*. Memorizing of poems. A very thorough course is given in composition and conversation, Lambert's "*Alltägliches*" being used as a text-book.

First and second semesters. Five hours.

HISTORY AND CIVICS.

The object of the courses in history will be: to interest the student in history studies; to furnish a knowledge of the facts of general history; to provide a thorough preparation for the more advanced courses in history and politics in the college; and to give the young man or woman who may not go beyond the Academy a course of study which may lead to a better appreciation of his own times and thereby prepare for a more intelligent and active participation in the responsibilities and duties of citizenship.

1 Ancient History.

From the Earlest Times to 800 A. D.

Second year. Five hours.

2 Mediaeval and Modern History.

Europe from the death of Charlemagne to the present time.

Third year. Four hours.

3 History of the United States. Civics.

Fourth year. Four hours.

LATIN.

The methods employed involve grammatical drill, accuracy and fluency in translation, and extended work in Latin composition. Correct pronunciation with special regard to quantity is insisted on from the beginning. The life and works of each author with their historical settings, are carefully studied.

1 First Year.

Elementary Latin. Inflections and constructions. Translations and elementary prose. Outline of Roman History. *Five hours.*

2 Second Year.

Latin Grammar. Caesar's *Commentaries*, four books. Latin Prose, twenty lessons. *Five hours.*

3 Third Year.

Cicero: six orations, and selected letters. Latin Prose, completed. *Five hours.*

4 Fourth Year.

Virgil's Aeneid, six books; Mythology. *Five hours.*

MATHEMATICS.

The courses in Academy Mathematics are prepared and conducted with a view to fit the student for entrance to any standard college and at the same time to give a thorough preparation for practical life. Many students will find the Academy their finishing school and should be prepared for business calculations and business thought. Constant drill, therefore, in the thought processes is considered the chief essential.

1 **Algebra.**

This course is pursued the first year and extends through Quadratic Equations. Mastery of elementary processes with accuracy and rapidity, rather than the solution of complex problems, is the aim in this introductory work.

First year.

2 **Plane Geometry.**

Open to students who have had course 1 or its equivalent. The fundamental propositions are demonstrated and discussed. Special attention is given to a limited number of original theorems and problems, accompanied by appropriate constructions and measurements.

Second year.

3 **Solid Geometry.**

Open to students who have had courses 1 and 2 or their equivalent. Special attention is given to the applications of Solid Geometry to practical problems in mensuration.

Third year. First semester.

4 **Algebra.**

Open to students who have had course 1, and preferably 2 and 3. This is a continuation of course 1 and includes a review of some of the subjects of that course. Advanced work in ratio, proportion and variation, the progressions and logarithms is pursued. Preparation for College Mathematics demands this course.

Third year. Second semester.

PUBLIC SPEAKING AND DRAMATIC LITERATURE.

To pupils who have taken the required three years' course in English one credit in English will be given for a year's work in Oratory or Shakespeare.

1 **Literary Interpretation.**

Declamation, recitation, extemporaneous speaking, debate, voice culture, gesture. The text-book used consists of selections

from the masterpieces of literature, including the Bible. In order to impress an audience with the sentiments of these great works it is necessary that the student learn to think with the authors; thus thought power and literary taste are developed, as well as larger views and sympathies.

2 Shakespeare.

Thorough study of one tragedy, one comedy, and one of the historical plays, including: extensive character analysis founded on the text; character sketches; thorough understanding of the text; dramatic analysis; memorizing passages; study of criticisms by prominent writers; dramatic interpretation. The study of Shakespeare interests the student in ethical problems, broadens his sympathies, elevates his ideals and establishes a taste for good literature.

PHYSICS.

1 Elementary Physics.

A study of the elementary principles and phenomena of Physics, largely non-mathematical. The work will consist of class room demonstrations, recitations, and laboratory work. The laboratory work and the class room work are carefully differentiated and at the same time closely correlated. In the first semester Mechanics, Heat and Magnetism will be studied. In the second semester the laws and phenomena of Electricity, Sound and Light will be discussed. The class room work is based upon Millikan and Gale's *First Course in Physics*. Each student will perform fifty experiments in the laboratory. Millikan and Gale's *Laboratory Course in Physics* will be used as a guide. Each student will have an assigned place for work in the laboratory. Neatness and accuracy in the laboratory work and clearness in the expression of the results obtained from the experiments will be insisted upon. This course should be taken by all students who expect to take Chemistry in the freshman year and by all students who expect to pursue advanced work in any science. Open to students in the last year of the Academy.

Two hours of recitation or laboratory work per day throughout the year. Five unit hours.

PHYSIOGRAPHY.

1 Physical Geography.

This is an introductory science course, which aims to develop a general understanding of earth phenomena, and to train pupils in the habit of scientific study. The subject includes five divisions. The first treats of the earth sphere, and the aim is to develop the concept of a spherical earth and lead to an understanding of the facts and phenomena which result. The second division treats of the land, or lithosphere. The agencies operating on the land, the resulting features, and the relation of these to man, are considered. The third division treats of the water, or hydrosphere. This is studied in its relations to the land and the atmosphere, and to man. The fourth division treats of the air, or atmosphere, which is dealt with in its relation to heat, moisture and weather, and to man. The fifth division is the life, or biosphere, which is treated as to distribution, relation to physical conditions and to man.

Daily recitations; first year, first semester.

2 Industrial Geography.

This course aims to establish the relation between physical conditions and industrial development. The industrial development of the United States is taken as the fundamental unit of study. Its relative and absolute location, and its climate and other physical conditions, are considered. Then its natural resources, its manufactures, and its commercial relations are studied, and its future development pictured. Other countries are studied relatively to the United States. A large collection of natural and manufactured products has been made in connection with this work. The scientific idea of causal relations is emphasized throughout, and principles, rather than facts alone, are made prominent.

Daily recitations; first year, second semester.

PROPOSED PLAN OF GROUNDS AND BUILDINGS.

GENERAL INFORMATION.

Student Organizations.

Several voluntary organizations among the students serve to direct into useful channels the various phases of student interest and activity.

Christian Associations.

Two very active and prosperous Christian organizations, one the Young Men's Christian Association, the other the Young Women's Christian Association, provide a very pleasant center for the religious life of the college. These associations have their prayer meetings for one-half hour at noon on Wednesdays, the young men and young women meeting in their separate halls. On Monday night is held a weekly college prayer meeting under the joint auspices of the faculty and these two associations. This meeting is frequently addressed by some member of the faculty or by one of the pastors or Christian workers of the city. These several services furnish the occasion and means of very great help and inspiration to all who attend, and they also promote a delightful Christian spirit in the college.

These societies have recently provided and furnished attractive and homelike rooms for study and reading and conference, and welcome here all students of the college.

Musical Clubs.

The three musical organizations of the college, the Men's Glee Club, the Ladies' Glee Club, and the Mandolin Club, supplement in a very practical way the work of the musical department of the college, and afford valuable training in chorus and orchestra work. A concert tour is made each year by the Glee and Mandolin Clubs.

Literary Societies.

Two societies for literary culture—the Aristonian and the Philomathean—provide centers and stimulus for the impulse to

independent, original literary expression. Their work consists of debates, studies of individual authors, orations, papers, book reviews, and discussion of events of present interest. They have furnished and equipped in attractive manner the halls provided for their use in the new Rankin Hall of Science. An annual debate is held between the two societies and a prize or trophy awarded to the winning society.

A debating society for young men—Athenae—provides further opportunity for work in oratory and debate.

A literary society is maintained by the students of the Academy.

A dramatic club has recently been organized by the young women in connection with the department of Dramatic Literature.

Oratorical League.

The Carroll College Oratorical League is composed of representatives of the literary societies, and has control of the local debates and oratorical contests. Two preliminary contests, and one final contest, in oratory are held each year. The winners in the final contest are the representatives of the college in the annual contest of the Wisconsin Intercollegiate Oratorical Association. The League also arranges for an annual prize debate between the literary societies of the college.

Athletic Association.

The Athletic Association represents the organized athletic interests of the college. Under its auspices the intercollegiate games in which the college participates are carried on. Detailed information of the athletic work of the college will be found in the statement of the Physical Departmnet.

Publications.

The Carroll Echo.

For a number of years the students have edited and published a monthly paper under the name of *The Carroll Echo.* Not only has this stimulated literary production among the students, and given happy expression to many phases of col-

lege life, but it has been a welcome visitors to homes of the alumni and other friends, and has been an effective medium of communication between the present student body and former students.

Hinakaga.

The junior class issues annually *Hinakaga*, a publication richly illustrated and representing all the varied interests of college life.

The Bulletin.

The Bulletin is issued quarterly by the faculty of the college.

Social Life.

The demands of young people for recreation and their need of social culture and enjoyment receive recognition and encouragement. Students are given as much liberty in social affairs as is consistent with the standard of scholarship and with the responsibility of the faculty for their welfare. Social events, in which members of the school participate, and class parties, are usually restricted to Friday and Saturday evenings, and are always under the supervision of the faculty.

Book Store.

A college book store is maintained, on the first floor of Voorhees Hall, where books and other necessary supplies may be obtained at reasonable prices.

Expenses.

College Fees.

The college year consists of 36 weeks and is divided into two semesters. Tuition bills are due in advance. No reduction is made for brief absences. If the tuition is not paid within two weeks of the beginning of the semester, $1.00 is added. The rates are as follows:

College: per year, $50.00.

Academy: per year, $40.00.

Commencement expenses for graduation:

From the Academy, $2.50.

From the College, $5.00.

The fixed concession in fees to the children of clergymen will hereafter be discontinued.

Laboratory Fees.

In all laboratory courses small fees are charged to cover the cost of material used in the laboratory. The fees, per semester, are as follows:

Chemistry: $5.00.

Biology 1, 16 and 17: $2.50.

Biology 11 and 20: $4.00.

Biology 22: $5.00 for the entire course.

Physics: $3.00.

Mineralogy: $2.50.

An annual breakage deposit of $5.00 in Chemistry will be required of each student. This deposit, or such part of it as has not been charged against the student for breakage, will be refunded at the close of the year.

In the Academy the laboratory fees are as follows: Biology, $2.50; Physics, $2.50.

Laboratory fees must be paid in advance. Under no conditions will they be refunded.

Living Expenses for Men.

A very important part of the expense for students is the cost of living; therefore every effort is made to keep this as low as possible. Excellent rooms, convenient to the college, may be had at from seventy-five cents to $2.00 per week. Table board is furnished by the college at $3.00 per week, and in private families at a similar rate. Opportunities for boarding in student clubs reduce still further the possible expense.

Living Expenses for Women.

The rooms of the Elizabeth Voorhees Dormitory are single and double, or may be used en suite. Each occupant of a room has her own closet. The price of rooms, including heat-

ing and lighting, ranges from $13.50 to $40.50 per semester. The rate for table board is $3.00 per week. Rooms are furnished with college cot, mattress, pillow, study chairs, dresser with mirror, wash stand, bowl and pitcher. The floors are of hard wood and students desiring rugs may furnish them. Bedding, window curtains, couch covers, table covers, napkins, and all other articles of convenience or adornment are furnished by each student.

Single rooms are 9 x 13 ft., and double rooms 12½ x 13½ ft.; windows, 38 x 64 in.; study tables, 2 x 3 ft.

Application for admission should be made early. A deposit of $5.00 is required from those engaging rooms, and a choice will be made according to such application. The deposit may be returned if the engagement is cancelled three weeks before the opening of the semester.

Opportunities for Self-Help.

There are many opportunities in the city for self-help. Most students desiring to help themselves can earn a considerable portion of their expenses during the year. Several young ladies find opportunities as helpers in homes for their board, and young men are able to find work in the homes, offices and factories of the city.

REGULATIONS.

Attendance.

Students must be prompt and regular in attendance. Tardiness and absence are fatal to good work. Persistence in these habits cannot be tolerated. The authorities of the college believe that the measure of value which the student derives from his work is adequately estimated, not by written examinations alone, but also by his presence and attention in the daily class exercises. Any student, therefore, who absents himself from classes without furnishing an acceptable excuse to his instructor may expect his standing to be lowered accordingly. Repetitions of such irregularity after due warning will deprive the student of his credit.

Students are required to attend the daily Chapel exercise, and a morning service on Sunday in the church of their choice, determined at their entrance.

Students absenting themselves from classes immediately preceding or immediately following any regular or appointed vacation during the school year, shall be required to take an examination in the subjects missed and to pay a fee of one dollar for the first and fifty cents for each additional subject so missed. For each day's absence following the first a fee of one dollar shall be required. Before being admitted to examination for reinstatement each student must present to his instructor a receipt from the college treasurer indicating that the above named fees have been paid. No instructor is permitted to exempt any student from these requirements unless furnished with an excuse which has been endorsed by the faculty.

Study Hours.

Students are required to keep regular study hours, setting apart at least two hours each evening, or the equivalent of this, for home study. Friday evening is excepted. Social affairs are discouraged on the first four evenings of the school week. Social gatherings must be reported to the President in advance and his approval secured.

Supervision.

While it is the purpose of the college to encourage self-government and to grant to students as much freedom as is consistent with their best interests and with the good order of the school, yet it is deemed necessary that students should be at all times under the supervision of the faculty.

Non-resident young women are required to live in the dormitory unless special permission to live elsewhere be given by the faculty.

Whenever it becomes apparent that a student's influence is harmful to other students he will be requested by the faculty to leave the school.

Students who have not at least a fair ability to acquire knowledge, and a reasonable willingness to study, will not be allowed to remain in the school.

Examinations and Grades.

Such tests and recitation period examinations are given from time to time as instructors may think necessary. At the close of each semester, four days are set apart, on which instructors give examinations covering a part, or the whole, of the semester's work. Full reports, embracing the work of each semester, are sent to the parents for their inspection. The passing mark of the school is 70. Those who are marked between 60 and 70 are said to be "conditioned" and may have an opportunity to make up the work. Those who are marked below 60 are regarded as having failed in the work, and in most cases will need to take the work over again.

The Wisconsin College of Physicians and Surgeons.

Medical Department of Carroll College.

The Faculty.

WILBUR O. CARRIER, A.M., D.D., *President.*
THOMAS C. PHILLIPS, S.B., M.D., *Dean.*

SOLON MARKS, M.D., *Emeritus Professor of Military Surgery and of Fractures and Dislocations.*

A. HAMILTON LEVINGS, M.D., *Professor of Surgery.*

URANUS O. B. WINGATE, M.D., *Professor of Nervous and Mental Diseases.*

WILLIAM H. WASHBURN, M.D., *Professor of Medicine.*

HENRY A. ALBERS, A.M., M.D., *Professor of Medicine.*

JAMES A. BACH, M.D., *Professor of Ophthalmology.*

HARRY A. SIFTON, M.D., *Professor of Clinical Surgery.*

LORENZO BOORSE, M.D., *Professor of Pediatrics.*

GUSTAV A. KLETZSCH, M.D., *Professor of Gynecology.*

HENRY BLANK, M.D., *Professor of Orthopedic Surgery.*

THOMAS C. PHILLIPS, S.B., M.D., *Professor of Ophthalmology and Otology and Dean of the Faculty.*

WILLIAM FRANCIS BECKER, M.D., *Professor of Mental and Nervous Diseases.*

GUSTAV A. HIPKE, M.D., *Professor of Obstetrics.*

HERMAN REINEKING, M.D., *Professor of Surgery.*

HENRY B. HITZ, M.D., *Professor of Rhinology and Laryngology.*

FRANK E. DARLING, S.B., M.D., *Professor of Bacteriology.*

LOUIS F. RUSCHAUPT, S.B., M.D., *Professor of Chemistry.*

JAMES D. MADISON, S.B., M.D., *Professor of Medicine.*

CURTIS A. EVANS, A.B., M.D., *Professor of Anatomy.*

E. ARMOR FLETCHER, M.D., *Professor of Genito-Urinary Surgery.*

GEORGE C. RUHLAND, M.D., *Professor of Pathology.*

MILTON M. SPITZ, M.D., *Professor of Therapeutics.*

OTTO H. FOERSTER, M.D., *Professor of Dermatology.*

WILMOT F. MILLER, M.D., *Professor of Electro-Therapeutics. and Associate in Neurology.*

HENRY HANSON, A.B., M.D., *Professor of Clinical Microscopy.*

MOSES J. WHITE, M.D., *Clinical Professor of Mental Diseases.*

GILBERT E. SEAMAN, M.D., *Clinical Professor of Ophthalmology.*

ALBERT WILLIAM MYERS, M.D., *Associate Professor of Pediatrics.*

FREDERICK C. GILLEN, M.D., *Associate Professor of Medicine.*

C. A. KREUTZER, M.D., *Associate Professor of Gynecology.*

ROBERT G. WASHBURN, S.B., M.D., *Associate in Dermatology.*

Special Lecturers.

SAMUEL W. FRENCH, A.B., M.D., *Ethics, Economics and Medical History.*

D. E. W. WENSTRAND, M.D., *Life Insurance.*

MAXILLIAN A. BUSSEWITZ, A.M., M.D., *Hygiene.*

HARRY M. SHEETS, L.L.B., *Medical Jurisprudence.*

RALPH PEAIRS, M.D., *Anaesthesia and Anaesthetics.*

J. O. COBB, M.D., *Epidemiology of Transmissible Diseases.*

F. E. DARLING, S.B., M.D., *Vital Statistics.*

PAUL STOVER, A.B., L.L.B., *Legal Mechanism for the Control of Diseases, Federal, State and Municipal.*

ROBERT G. WASHBURN, S.B., M.D., *Medical Zoology.*

PIERSON HALSEY, L.L.B., *Mushrooms.*

E. ARMOR FLETCHER, M.D., *Hygiene of Venereal Diseases.*

GEORGE P. BARTH, M.D., *School Hygiene.*

GERHARD A. BADING, M.D., *Milk Supply in Relation to Disease.*

A. B. PLOWMAN, PH.D., *Eugenics.*

Lecturers, Demonstrators and Instructors.

ARTHUR REITMAN, S.B., M.D., *Clinical Instructor in Obstetrics.*

J. HILTON SURE, M.D., *Lecturer on Obstetrics.*

CLAUDE S. BEEBE, S.B., M.D., *Clinical Instructor in Rhinology and Laryngology.*

ALFRED KASTNER, M.D., *Instructor in Pediatrics.*

NORMAN F. HOLLENBECK, S.B., M.D., *Instructor in Obstetrics.*

WILLIAM ACKERMANN, M.D., *Instructor in Clinical Medicine.*

ALEXANDER KREMERS, M.D., *Demonstrator of Anatomy.*

WILLIAM S. DARLING, S.B., M.D., *Instructor in Anatomy.*

HARRY F. McBEATH, M.D., *Clinical Instructor in Ophthalmology and Otology.*

HARRY J. HEEB, M.D., *Clinical Instructor in Ophthalmology and Otology.*

BENJAMIN F. ARMBRUSTER, A.M., M.D., *Lecturer on Embryology and Demonstrator of Operative Surgery.*

WALTER T. McNAUGHTON, M.D., *Clinical Assistant in Pediatrics.*

GEORGE F. ZAUN, M.D., *Clinical Instructor in Ophthalmology.*

OSCAR LOTZ, M.D., *Instructor in Pharmacology.*

EDWIN M. TILLSON, M.D., *Instructor in Diagnosis.*

FRANCIS A. THOMPSON, M.D., *Instructor in Clinical Medicine.*

DANIEL L. BRADY, A.B., M.D., *Instructor in Physiology.*

FREDERICK A. STRATTON, M.D., *Instructor in Surgery.*

HARRY F. McCABE, M.D., *Assistant Demonstrator of Anatomy.*

CLEMENS MESSMER, M.D., *Clinical Instructor in Ophthalmology and Otology.*

CLYDE W. MORTER, M.D., *Clinical Assistant in Pediatrics.*

DIRK BRUINS, M.D., *Instructor in Anatomy.*

MAX BORNSTEIN, M.D., *Instructor in Anatomy.*

J. S. JANSEN, *Roentgenologist.*

WINIFRED M. FRYE, *Clerk.*

General Statement.

In the summer of 1909, the Wisconsin College of Physicians and Surgeons of Milwaukee became the Medical Department of Carroll College, which in the future will confer the medical degrees and control the work of the medical school.

Admission.

For admission to the medical school, the student must have had, as a minimum, at least one year of scholastic training beyond a four years' high school course; this to be in chemistry,

physics, biology, and modern language. A student may enter with a condition in a part of this work.

Course of Study.

The course in this school includes four years of eight months each. The first two years are devoted to the study of the sciences lying at the foundation of medicine: anatomy, physiology, physiologic chemistry, histology, bacteriology, pathology, pharmacology, embryology, and hygiene. The last two years are devoted to the practical departments of medicine and surgery.

Equipment.

The buildings and equipment are modern and adequate to the needs of a first class scientific and practical training. Milwaukee, with more than 350,000 population, furnishes abundant material for clinical teaching. The sources of this material are the College Free Dispensary, St. Joseph's Hospital, the Children's Free Hospital, the Milwaukee Maternity Hospital, the Milwaukee County Hospital, and the Milwaukee County Hospital for the Insane. The newly equipped clinical laboratory of the County Hospital furnishes a magnificent opportunity for training in clinical microscopy.

Degrees.

Students taking two years of work in Carroll College, or in a college accredited by Carroll College, before entering the medical school, may at graduation receive the two degrees, A.B. and M.D.

Fees.

The medical college fees are as follows: a matriculation fee of $5.00 paid on first registration; $65.00 general fee for each semester; $10.00 Maternity Hospital fee; $15.00 graduation fee; and the cost of anatomic material.

Fuller information is given in the special catalogue of this department, which may be obtained on application to the Dean.

The Wisconsin College of Dentistry.

Dental Department of Carroll College.

The Faculty.

WILBUR O. CARRIER, A.M., D.D., *President.*

PERCY B. WRIGHT, D.D.S., *Dean.*

A. HAMILTON LEVINGS, M.D., *Professor of Oral Surgery.*

LOUIS J. STEPHAN, D.D.S., *Professor of Dental Pathology and Therapeutics.*

CHAS. L. BABCOCK, D.D.S., *Professor of Dental History and Ethics.*

P. B. WRIGHT, D.D.S., *Professor of Operative Dentistry, Superintendent of Infirmary and Dean of Faculty.*

RENO WEISS, D.D.S., *Professor of Orthodontia.*

E. T. HANDY, D.D.S., *Professor of Prosthetic Dentistry.*

E. M. JONES, D.D.S., *Professor of Dental Metallurgy.*

RAYMOND J. WENKER, D.D.S., *Professor of Operative Technics and Dental Anatomy.*

FRANK E. DARLING, S.B., M.D., *Professor of Bacteriology.*

LOUIS F. RUSCHHAUPT, S.B., M.D., *Professor of Chemistry.*

CURTIS A. EVANS, A.B., M.D., *Professor of Anatomy.*

GEORGE C. RUHLAND, M.D., *Professor of Pathology.*

JOHN LAUGEN. D.D.S., *Professor of Clinical Dentistry.*

Lecturers, Demonstrators and Instructors.

ADOLPH GROPPER, *Lecturer and Demonstrator of Crown and Bridge Work, Porcelain and Continuous Gum.*

WM. C. WENDEL, D.D.S., *Lecturer on Operative Dentistry.*

OTTO H. FOERSTER, M.D., *Lecturer on the Oral Manifestations of Syphilis.*

FREDERICK H. BERRY, D.D.S., *Lecturer on Prosthetic Dentistry, illustrated with Stereoptican.*

WM. H. CUDWORTH, *Demonstrator of Porcelain Inlay and Crown Work.*

R. G. RICHTER, D.D.S., *Lecturer on Oral Pathology and Surgery.*

E. F. KING, D.D.S., *Instructor in Porcelain and Gold Inlays.*

C. W. HALL, D.D.S., *Lecturer on Oral Hygiene and Prophylaxis.*

H. E. HOLBROOK, S.B., D.D.S., *Lecturer on Dental Histology and Embryology.*

E. J. PATTERSON, Attorney at Law, *Lecturer on Dental Jurisprudence.*

EDWIN M. TILLSON, M.D., *Lecturer on Diagnosis.*

R. J. WENKER, D.D.S., *Lecturer on Orthodontia.*

ALEXANDER KREMERS, M.D., *Demonstrator of Anatomy.*

DANIEL L. BRADY, A.B., M.D., *Instructor in Physiology and Pathology.*

WILLIAM W. GILLESPIE, S.B., M.D., *Instructor in Anatomy.*

RALPH P. PEAIRS, M.D., *Lecturer on Anaesthetics.*

M. M. SPITZ, M.D., *Lecturer on Anaesthetics and Diagnosis.*

G. C. RUHLAND, M.D., *Lecturer on Histology.*

J. S. JANSSEN, *Roentgenologist; Demonstrator of the X-Ray in Dentistry.*

CARL B. CASE, D.D.S., *Demonstrator of Obturators for Cleft Palate.*

HENRY F. McCABE, M.D., *Assistant Demonstrator of Anatomy.*

EDWARD S. LOGE, M.D., *Instructor in Dental Materia Medica.*

WINIFRED FRYE, *Clerk.*

General Statement.

The Wisconsin College of Dentistry, which became the Dental Department of Carroll College, June 26, 1909, offers a systematic and practical course of instruction covering a period of three years and leading up to the degree of Doctor of Dental Surgery.

Admission.

The requirements for admission to this department are graduation from a recognized high school, or an equivalent certificate showing credits in fourteen high school studies, or passing an examination satisfactory to the regular examiner appointed by the State Superintendent of Public Instruction.

Course of Study.

The course of instruction for the first year includes anatomy, histology, chemistry, physiology, and practical laboratory work in operative and mechanical dentistry.

The course for the second year includes anatomy, chemistry, physiology, pathology, materia medica, bacteriology, metallurgy, crown and bridge work, operative and prosthetic dentistry, orthodontia and clinical practice.

The course for the third year includes operative and prosthetic dentistry, oral surgery, dental pathology and therapeutics, orthodontia, anesthesia, and physical diagnosis and several other special lectures and demonstrations. Every afternoon and three mornings each week are devoted to practical work on patients in the dental infirmary. A thoroughly practical course of instruction is given which equips the graduate to begin successful practice immediately.

Fees and Expenses.

The matriculation fee is $5.00 for the first year only. The annual fee is $150.00 payable each year. The graduation fee is $15.00. A fee of $2.00 is charged for the use of microscopes. The required text-books cost from $15.00 to $20.00 the first year, and for the junior and senior years about $25.

COLLEGE OF PHYSICIANS AND SURGEONS.

The necessary tools and instruments cost from $40.00 to $50.00 the first year, and about $100.00 for the second and third years.

The purchase of instruments and books should be considered a permanent investment, for if properly cared for they will be of service to the student for many years after graduation. A course in manual training or a natural inclination for mechanics is a highly desirable qualification in beginning the study of dentistry.

There is an increasing demand for capable and skillful dentists and as a profession Dentistry takes its rank among the most honorable.

Fuller information is given in the special catalogue of the department, which may be obtained on application to the Dean. tion to the Dean.

Roll of Students.

COLLEGE.

Senior Class.

Hartness, Rebekah Mary	Waukesha, Wis.
Lean, Inez	Waukesha, Wis.
McFetridge, Clarissa May	Oshkosh, Wis.
Schneider, Ada Emma	Merton, Wis.
Craven, Alexander Robert	Waukesha, Wis.
Fries, Arthur Abel	Waterford, Wis.
Fries, John Edmund	Waterford, Wis.
Holt, Harvey Ellis	Oconomowoc, Wis.
James, Frank Gordon	Chicago, Wis.
Johnson, Eddie Edward	Wausau, Wis.
Kerr, Joseph	Lowell, Mass.
Palmer, Frederick Rodman	Waukesha, Wis.
Phillips, Matthias J. W.	Waukesha, Wis.
Van Griethuysen, Claude Andre	Oostburg, Wis.
Ver Straate, John	Sheboygan Falls, Wis.
Weaver, Andrew Thomas	Sussex, Wis.

Junior Class.

Anderson, Beatrice Elizabeth	Shawano, Wis.
Anderson, Bernice Janet	Shawano, Wis.
Baker, Frances Helen June	Stevens Point, Wis.
Benton, Grace Lucretia	Waukesha, Wis.
Cleverdon, Helen Frances	Chicago, Ill.
Phillips, Myrtle Agnes	Waukesha, Wis.
Richards, Mary America	Sharon Springs, Kan.
Smith, Edna Marie	Superior, Wis.
Stoltz, Edna Beatrice	Sechlerville, Wis.
Avery, Charles Henry	Quincy, Wis.
Blair, Francis John	Janesville, Wis.
Copps, Clinton William	Stevens Point, Wis.
Davies, John Rees	Racine, Wis.

Erickson, Louis Ockie	Wausaukee, Wis.
Evans, Ewart Owen	Genesee Depot, Wis.
Huenink, Henry Lawrence	Cedar Grove, Wis.
Lang, Emil Henry	Waukesha, Wis.
Porter, Lawrence Clarke	Cambridge, Wis.
Spooner, Walter Deloss	Green Bay, Wis.
Upham, William Nathan	Marshfield, Wis.

Sophomore Class.

Anderson, Laurel Eleanor	Manitowoc, Wis.
Baber, Florence Edith	St. Paul, Minn.
Bean, Gertrude Sydnie	Waukesha, Wis.
Campbell, Bessie Boardman	Wausau, Wis.
Carrier, Cornelia Myrta	Waukesha, Wis.
Erdman, Annabelle	Waukesha, Wis.
Griffith, Ellen Margaret	Waukesha, Wis.
Hansen, Mabel Lillian	Neenah, Wis.
Horne, Ella Margaret	La Crosse, Wis.
Johnson, Adah Jessup	Omro, Wis.
Larkin, Laura Evelyn	Oconomowoc, Wis.
McLean, Agnes Derby	Waukesha, Wis.
Rowlands, Sadie Belle	Waukesha, Wis.
Spickard, Julia	Richland Center, Wis.
Steare, Augusta Amelia	Rib Lake, Wis.
Bismarck, Clinton Orr	Wausau, Wis.
Hanson, Edward Wilbur	Three Lakes, Wis.
Katerndahl, Carl Ernest	Stevens Point, Wis.
Laney, Willard John	Dousman, Wis.
McLean, Calvin James	Waukesha, Wis.
Merriam, Chauncey Lot	Superior, Wis.
Miller, Henry George	Cambria, Wis.
Ross, Leslie Hugh	Waukesha, Wis.
Smith, Warren Braman	Waukesha, Wis.
Sockett, Herbert Thomas	West Toronto, Canada
Strand, Loyd Mabie	Mellen, Wis.

Freshman Class.

Buchan, Katherine Frances	Waukesha, Wis.
Curtis, Maude Eliza	Horicon, Wis.

Davis, Grace	Richland Center, Wis.
Drought, Jenny Adaline	Waukesha, Wis.
Frazier, Gertrude	Manitowoc, Wis.
Hartness, Marion Easter	Waukesha, Wis.
Hudson, Alice	Wausau, Wis.
Krause, Elsie	Sauk City, Wis.
Mair, Jean Morgan	Merrill, Wis.
Matthews, Maude Eunice	Waukesha, Wis.
Montgomery, Mary Elizabeth	Wausau, Wis.
Norton, Edna Alberta	Marinette, Wis.
Ormond, Jessie Cecelia	Horicon, Wis.
Palmer, Alice Webber	Waukesha, Wis.
Ryan, Kathryn Frances	Waukesha, Wis.
Stofer, Leona	Richland Center, Wis.
Strand, Estelle Marguerite	Mellen, Wis.
Taylor, Lillian Vivian	Westfield, Wis.
Trewyn, Frances Iola	Palmyra, Wis.
Watt, Ella Jeanette	Waukesha, Wis.
Weeks, Juliet Naomi	Waukesha, Wis.
Wiley, Jean Ballentine	Chicago, Ill.
Wilson, Minnie Ellen	Merrill, Wis.
Wing, Alma Mathilda	Lake Preston, S. D.
Anderson, Leroy J.	Manitowoc, Wis.
Ash, Oliver Jay	La Crosse, Wis.
Ayers, Augustus Townsend	Oshkosh, Wis.
Boone, Harold Ward	Shawano, Wis.
Brightman, Herbert W.	Wausaukee, Wis.
Buckley, John Francis	Waukesha, Wis.
Campbell, Hugh Martin	Wausau, Wis.
Copps, Lyman Alden	Stevens Point, Wis.
Clayton, Emerson	Waukesha, Wis.
Crosby, Charles Logan	Rhinelander, Wis.
Davies, Zackariah	Waukesha, Wis.
Feiring, Julius Ferdinand	Waukesha, Wis.
Finn, Edward Albert	Waukesha, Wis.
Fletcher, Edwin Wesley	Westfield, Wis.
Frisk, Elmer	Green Bay, Wis.
Fuller, Asa Kent	Wausau, Wis.
Hannon, Ralph Stanley	Green Bay, Wis.

Hommel, Placido R. V.	Neillsville, Wis.
Humphrey, Arthur	Shawano, Wis.
Johnson, Paul Sheldon	Omro, Wis.
Jones, Royal Addison	West Salem, Wis.
Laing, Royden Arthur	Sechlerville, Wis.
Levenhagen, Fred George	Wausau, Wis.
Malone, Andrew Paul	Waukesha, Wis.
McKean, Charles Robert	Woodson, Ill.
McMullen, Alex Clifford	Appleton, Wis.
Moe, Oluf Rudolph	Wausaukee, Wis.
Peterson, Clarence Eugene	Green Bay, Wis.
Pomeroy, Harry	Amherst, Wis.
Quaw, Stephen Duane	Wausau, Wis.
Rousell, George	Paris, Canada
Smith, John Wesley	Fosterville, Wis.
Textor, Arthur Henry	Wausau, Wis.
Vaughan, John Joshua	Bangor, Wis.
Wellington, John V.	Winneconne, Wis.
Whitney, Claude Harvey	Glidden, Wis.

ACADEMY.

Fourth Year.

Douglass, Olive Florence	Waukesha, Wis.
Edwards, Catherine Anderson	Nashota, Wis.
Erdman, Margaret Augusta	Waukesha, Wis.
Howard, Beatrice M.	Waukesha, Wis.
Johnson, Ethel Viola	Waukesha, Wis.
Mills, Mabel	Wales, Wis.
Mitchell, Ethel Anna	Brookfield, Wis.
Nohr, Agnes Josephine	Waupaca, Wis.
Schilling, Grace Elizabeth	Abbotsford, Wis.
Wheeler, Dorothy May	Waukesha, Wis.
Abel, Carl Frederick	Templeton, Wis.
Archbold, Arthur Adrian	Chicago, Ill.
Benjamin, Mooshie Sargis	Oroomia, Persia
Gilham, Wyn Frederic Wm.	Wausau, Wis.
Glover, James E.	Waukesha, Wis.

Grebel, R. Emerson	Green Bay, Wis.
Jones, Dewitt	Wales, Wis.
Kuhnert, Harry Carl	Waukesha, Wis.
Lee, Henry Rhodes	Oostburg, Wis.
Lunt, Alfred Davis	Waukesha, Wis.
McDonald, Guy Foster	Arbor Vitae, Wis.
Roberts, Frank Louis	Waukesha, Wis.
Romaine, Elden Van	Campbellsport, Wis.
Ruckweed, Fred	Marshfield, Wis.
Tibbits, Armand Rhodes	Waukesha, Wis.
Ward, Frederick	Waukesha, Wis.
Williamson, Chester Hubbard	Memphis, Tenn.
Wilson, Karl	Waukesha, Wis.
Winton, Arthur Vanderpool	Prospect, Wis.

Third Year.

Buswell, Lucy Jane	Hurley, Wis.
Champeny, Bernice	Hartland, Wis.
Flieth, Mabel	Wausau, Wis.
Fries, Grace Julian	Waterford, Wis.
Holtz, Edna Florence	Waukesha, Wis.
Jensen, Olga Eleanor	Oshkosh, Wis.
McKenzie, Ethelyn	Mukwonago, Wis.
McVicar, Ione	Milwaukee, Wis.
Staab, Elsie May	Waukesha, Wis.
Breese, Clinton Samuel	Waukesha, Wis.
Daniel, John Thomas	Cambria, Wis.
Dropp, Edward Wilbur	Middle Inlet, Wis.
Freye, Benjamin Henry	Neshkora, Wis.
Gardner, Clarence	Waukesha, Wis.
Guthrie, Chauncey Tilyard	Waukesha, Wis.
Guthrie, Horace Kier	Waukesha, Wis.
Hartman, Howard Albert	Waukesha, Wis.
Johnson, Edward John	Melrose, Wis.
Lundberg, William	Marinette, Wis.
Raue, Edward	Neenah, Wis.
Roeseler, Oscar Edwin	Waukesha, Wis.
Saunders, Oliver Charles	Dousman, Wis.

Schmid, George	Chicago, Ill.
Skinner, Clarence Leslie	Mellen, Wis.
Weaver, Ray Bennett	Sussex, Wis.
Williams, William Thomas	Waukesha, Wis.
Youmans, John Marlow	Mukwonago, Wis.

Second Year.

Bartholomew, Ethelwyn Louise	Racine, Wis.
Chapman, Lucy Leola	Waukesha, Wis.
Clayton, Addie May	Waukesha, Wis.
Crary, Zenanna	Waukesha, Wis.
Hartness, Margaret VanNess	Waukesha, Wis.
Jenkins, Ruth Mary	Wales, Wis.
McInnis, Bessie	Wausau, Wis.
Michel, Methilda Margaret	Waukesha, Wis.
Roeseler, Edna Louise	Waukesha, Wis.
Ross, Eva Marie	Alliance, Neb.
Ryan, Josephine Agnes	Waukesha, Wis.
Watt, Grace Alberta	Waukesha, Wis.
Armstrong, Lewis Walton	Milwaukee, Wis.
Badger, Ben	Kellogg, Iowa
Brightman, Albert Brown	Wausaukee, Wis.
Champeny, Talbert Everett	Hartland, Wis.
Coon, Roy Mead	Wales, Wis.
Darling, James Roland	Mukwonago, Wis.
Dey, Albert Van Brunt	Waukesha, Wis.
Federer, Francis Albert	Waukesha, Wis.
Fuller, Edwin	Hartland, Wis.
Gaspar, Harold Lee	Waukesha, Wis.
Glasgow, Elkins Hersman	Woodson, Ill.
Hoffman, Erwin William	Pewaukee, Wis.
Love, Addison Forbes	Waukesha, Wis.
McFarlane, Robert Moses	Waukesha, Wis
Notbohm, DeLon	Dousman, Wis
Schaub, William Adolph	Wilkinsburg, Pa.
Smith, Eugene Louis	Lake Beulah, Wis.
Winton, Howard Abram	Prospect, Wis.
Young, John Harrison	North Bend, Wis.

First Year.

Bostwick, Leona	Waukesha, Wis.
Douglass, Marjorie Ruth	Waukesha, Wis.
Hodgson, Vivian	Waukesha, Wis.
Loose, Kathryn Alice	Waukesha, Wis.
Mills, Gladys	Wales, Wis.
Murray, Mary	Polo, Ill.
Seymour, Ida Marie	Polo, Ill.
Vanderpool, Ethel May	Nashota, Wis.
Wiesenthal, Florence Jennie	Waukesha, Wis.
Williams, Edna Jane	Dietz, Wyo.
Williams, Margaret Anna	Wales, Wis.
Williamson, Caroline	Memphis, Tenn.
Cowling, William Richard	Wausau, Wis.
Edwards, Robert Thomas	Wales, Wis.
Laney, Thomas David	Dousman, Wis.
Latham, Lloyd Winslow	Abbotsford, Wis.
Overton, Samuel Watkins	Waukesha, Wis.
Rasmussen, Arthur	Thorp, Wis.

MUSIC DEPARTMENT.

Voice.

Anderson, Laurel	Manitowoc, Wis.
Carrier, Cornelia	Waukesha, Wis.
Baker, Frances	Stevens Point, Wis.
Busse, Ella	Waukesha, Wis.
England, Jessie	Waukesha, Wis.
Evans, Grace	Waukesha, Wis.
Ganfield, Clara	Waukesha, Wis.
Holtz, Edna	Waukesha, Wis.
Horne, Ella	La Crosse, Wis.
Klett, Theodore	Waukesha, Wis.
McKean, Charles	Woodson, Ill.
Ross, Leslie	Waukesha, Wis.
Spooner, Walter	Green Bay, Wis.
Textor, Arthur	Wausau, Wis.
Weaver, Ray	Sussex, Wis.

Piano.

Barnum, Elizabeth	Waukesha, Wis.
Baker, Frances	Stevens Point, Wis.
Bean, Dorothy	Waukesha, Wis.
Bostwick, Leola	Waukesha, Wis.
Brown, Helen	Waukesha, Wis.
Bruce, Beatrice	Waukesha, Wis.
Campbell, Eleanor	Waukesha, Wis.
Cleverdon, Helen	Chicago, Ill.
Dey, Katherine	Waukesha, Wis.
England, Jessie	Waukesha, Wis.
Erdman, Annabelle	Waukesha, Wis.
Flieth, Mabel	Wausau, Wis.
Hartman, Mildred	Waukesha, Wis.
Putney, Jean,	Waukesha, Wis.
Raymond, Flora	Waukesha, Wis.
Roberts, Ethel	Waukesha, Wis.
Seymour, Ida	Polo, Ill.
Schilling, Grace	Abbotsford, Wis.
Smith, Anna	Waukesha, Wis.
Snyder, Celia	Waukesha, Wis.
Spickard, Julia	Richland Center, Wis.
Taylor, Lillian	Westfield, Wis.
Vanderpool, Ethel	Nashota, Wis.
Weber, Adelaide	Waukesha, Wis.
Weber, Virginia	Waukesha, Wis.
Whitnell, May	Waukesha, Wis.
Williams, Edna	Deitz, Wyo.
Anderson, Leroy	Manitowoc, Wis.
Armstrong, Lewis	Milwaukee, Wis.
Ash, Oliver	La Crosse, Wis.
Benjamin, Mooshie	Oroomia, Persia
James, Frank	Chicago, Ill.
Noble, Russell	Waukesha, Wis.
Verstraate, John	Sheboygan Falls, Wis.
Weber, Richard	Waukesha, Wis.

Mandolin and Guitar.

Gordon, Frances	Waukesha, Wis.
Hunt, Mabel	Waukesha, Wis.
Trewyn, Frances	Palmyra, Wis.
White, Charlotte	Waukesha, Wis.
Archbold, Arthur	Chicago, Ill.
Brightman, Albert	Wausaukee, Wis.
Brightman, Herbert	Wausaukee, Wis.
Kuhnert, Harry	Waukesha, Wis.
Mulany, John	Waukesha, Wis.
Phelps, Kenneth	Waukesha, Wis.
Porter, Clarke	Cambridge, Wis.
Sleep, Roy	Waukesha, Wis.
Weaver, Andrew	Sussex, Wis.

MEDICAL DEPARTMENT.

Fourth Year.

Buell, Hiram Allen	Wisconsin
Goggins, John W.	Wisconsin
Hess, John W.	Wisconsin
Richards, Chester Barrow	Wisconsin
Rea, Mrs. Albertina	Wisconsin
Van Schaick, Roy E.	Wisconsin
Voorus, Leo	Wisconsin

Third Year.

Bauch, Charles Wm.	Wisconsin
Binnie, Helen	Wisconsin
Carthous, Alfred Herman	Wisconsin
Domann, William	Wisconsin
Franklin, Isadore	Wisconsin
Kremers, Walter Gerhard	Wisconsin
Lobedan, Emil	Wisconsin
Moquin, Marie A.	Minnesota
Meyer, Raymond Carl	Wisconsin
Phillips, Frank	Wisconsin
Schmidt, Fred M.	Wisconsin
Stolz, Engels Charles	Wisconsin
Williams, David Loyd	Wisconsin

Second Year.

Dowswell, Walter W.	Minnesota
Fencil, Yearslaf J.	Wisconsin
Kapplemann, Fred W.	Wisconsin
Karras, Walter Ray	Wisconsin
Keland, George A.	South Dakota
Keland, Herald Berg	South Dakota
LeGault, George Alexander	Wisconsin
Wenzel, Erwin Frank	Wisconsin
Winnemann, Walter	Wisconsin

First Year.

Amundson, Karl Keogh	Wisconsin
Brook, Jeffrey J., Jr.	Wisconsin
Boynton, Ray D.	Wisconsin
Cowles, Andrew G.	Illinois
Cowles, Robert Lewis	Illinois
De Nosaqua, Samuel	Wisconsin
Dailey, Paul John	Wisconsin
Durner, Urban	Wisconsin
Gallant, Benjamin Franklin	Wisconsin
Holmes, Benjamin H.	Wisconsin
Hirschbaeck, John W.	Wisconsin
Kumm, Vernon Ernst	Wisconsin
Lein, Arthur Edward	Wisconsin
Moeller, Maximilian Wollmer	Wisconsin
Mangold, Emory	Wisconsin
Miller, Wilmot Paul	Wisconsin
Meisenheimer, Albert	Wisconsin
Nelson, Raymond Nicholas	Wisconsin
Rauschenberger, Ernst	Wisconsin
Stolz, Henry Charles	Wisconsin
Smith, Halley A.	Wisconsin
Schweda, Joseph	Wisconsin
Towle, George E.	Wisconsin
Thompson, William Lloyd	Wisconsin
Thompson, Rollin David	Wisconsin
Van Schaick, Harold Dean	Wisconsin

DENTAL DEPARTMENT.

Third Year.

Block, Arnold	Wisconsin
Mayr, Frank	Wisconsin
Puls, Frederick	Wisconsin
Schlueter, Frank	Wisconsin

Second Year.

Buck, Roy W.	Wisconsin
Donovan, John M.	Wisconsin
Gratz, Charles	Wisconsin
Gilbert, Zina M.	Wisconsin
Sparks, Frank Herold	Wisconsin
Thelan, Louis	Wisconsin
Zwerg, Olga	Wisconsin

First Year.

Backus, Alvin D.	Wisconsin
Dittberner, Fred J.	Wisconsin
Klein, Charles Joseph	Wisconsin
Negard, Otis Emory	Wisconsin
Richards, Stewart F.	Wisconsin
Reubin, William	Wisconsin
Winn, C. Adelbert	Wisconsin
Jones, Orvis Grant	Wisconsin

Summary of Students.

COLLEGE:		
Seniors	16	
Juniors	20	
Sophomores	26	
Freshmen	60	
	—	122
ACADEMY:		
Fourth Year	29	
Third Year	27	
Second Year	31	
First Year	18	
	—	105
MUSIC DEPARTMENT:		
Voice	15	
Piano	35	
Mandolin and Guitar	13	
	—	63
		290
Duplicates		34
Net total		256
MEDICAL DEPARTMENT		55
DENTAL DEPARTMENT		19
Total		330

INDEX.

PAGE.

Academy 92
  Courses of Study. 92
Admission, Terms of. 24
  to Advanced Standing. . 28
  by Certificate 24
  by Examination 24
  to Partial Courses. 27
  Requirements for 24
Advisers, Student 28
Algebra 67, 95
American Literature 53
Athletic Association. 102
Bachelor's Degree 29, 32
Buildings and Equipment. . 16
Bacteriology 42
Biblical Literature 37
Biology 39, 94
  Laboratories 19
Book Store 103
Botany 40, 41
Calendar 6
Chemistry 43
  Course in 35
  Laboratories 17
Civics 96
Christian Associations 101
Dental Department 112
Departments of Instruction 37
Dormitory 22
Dramatic Literature 80
Education 50, 94
Electives 31
Embryology 41
English 52, 95
Ethics 76

PAGE.

Evolution, Organic 42
Examinations 107
Expenses 103
Faculty 10
  Committees 12
French 71, 74
Freshman Year 31
Geology 55
  Laboratory 20
General Information 101
German 71, 72, 96
Grades 107
Greek 56
Groups, with major in
  Biology 43
  Chemistry 49
  English 54
  German 74
  History 64
  Latin 56
  Mathematics 70
  Philosophy 76
History 57, 94, 96
Introduction 13
Laboratories 17
  Fees 104
Latin 64, 97
Law and Politics. 61
Library 21
Literary Societies 101
Location 15
Logic 75
Major Study 30
Mathematics 67, 97
Medical Department 108

PAGE.
Mineralogy 71
Museum 21
Music Department 82
Clubs 101
Oratory 78, 98
Oratorical League 102
Philosophy 75
Physical Department 89
Physics 76, 99
Laboratories 18
Physiography 100
Physiology 40
Piano, Instruction in. 83
Political Economy 62
President's Home 23
Professional Courses,
Preparation for 32
Engineering 34
Law 34
Medicine 32
Teaching 32
Theology 34
Psychology 50
Publications 102
Rankin Hall of Science. . . . 17
Registration 29
Regulations 106
Relation to State University 28

PAGE.
Required Studies 30
Requirements for Degree 29, 32
Rhetoric and Composition 52, 95
Sociology 80
Sophomore, Junior and Senior Years 32
Student Organizations 101
Students, Roll of. 115
Summary of 126
Surveying 20
Teachers' Courses in
Biology 43
Chemistry 47
Education 50
English 54
History 64
Latin 56
Mathematics 70
Thesis 30
Trigonometry 67
Trustees, Board of. 8
Committees of 9
Officers of 10
Tuition 103
Scholarship, University . . . 36
Voice, Instruction in. 86
Voorhees Hall 16
Zoology 40, 94

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CHRISTO ET LITTERIS
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